

UNDERGRADUATE AND GRADUATE CATALOG

1997 – 1998



**Lebanon Valley College
of Pennsylvania**

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LEBANON VALLEY COLLEGE

Founded: 1866, as a private coeducational institution on the site of the Annville Academy. Became a four-year institution by 1883 as the lower grades were phased out.

Curriculum: a four-year program of study in the liberal arts with an academic year comprised of fall and spring semesters and an optional summer term.

Degrees granted: Bachelor of Arts, Bachelor of Music, Bachelor of Science, Associate of Arts, Associate of Science, Master of Business Administration, Master of Science Education.

Major fields of study: accounting, actuarial science, American studies, applied computer science, biochemistry, biology, business, chemistry, computer science, economics, elementary education, English, French, German, health care management, history, hotel management, international business, mathematics, medical technology, music, music education, music technology, philosophy, physics, political science, psychobiology, psychology, religion, sociology, Spanish.

Special programs: military science (ROTC), secondary education certification; *in cooperation with Thomas Jefferson University*: cytotechnology, cytogenetics, diagnostic imaging, nursing, occupational therapy, physical therapy; *in cooperation with University of Pennsylvania, Case Western Reserve University, and Widener University*: engineering; *in cooperation with Duke University*: forestry, environmental sciences; *in cooperation with approved hospitals*: medical technology.

Special options: departmental honors, double majors, independent study, individualized majors, internships, tutorial study, study abroad, Washington semester program.

Number of faculty: 77; of the permanent faculty 80 percent have earned a Ph.D. or equivalent terminal degree.

Student-faculty ratio: 16:1, with an average class size of 20.

Location: Annville, founded in 1799, is a small town of approximately 5,000 people located in south central Pennsylvania. Driving times: Hershey, 10 minutes; Harrisburg, 1/2 hour; Baltimore, 2 hours; Philadelphia, 2 hours; New York, 3 hours; Washington, D.C., 3 hours.

Size of campus: 30 buildings. The library contains over 172,000 catalog items, and the college provides students with access to 200 personal computers. The sports center is nationally recognized for its water fitness program.

Residence halls: Thirteen residence halls housing 915 students in male, female and coed facilities.

Student enrollment: 1182 full-time undergraduate students, with 500 part-time undergraduates and 197 graduate students.

Student financial aid: approximately 87 percent receive financial aid in the form of grants. Total financial aid in the form of LVC grant and academic scholarships for 1997 was \$6,530,961. The average grant and scholarship totaled \$6,719.

THE MISSION OF THE COLLEGE

Lebanon Valley is a small, private, liberal arts college. Its mission arises directly from its historical traditions and a relationship with the United Methodist Church.

The College's aim is to enable our students to become people of broad vision, capable of making informed decisions, and prepared for a life of service to others. To that end we seek to provide an education that helps students to acquire the knowledge, skills, attitudes, and values necessary to live and work in a changing, diverse, and fragile world.

Through both curricular and co-curricular activities we endeavor to acquaint our students with humanity's most significant ideas and accomplishments, to develop their abilities to think logically and communicate clearly, to give them practice in precise analysis and effective performance, and to enhance their sensitivity to and appreciation of differences among human beings.

Lebanon Valley College aspires to pursue this mission within a community in which caring and concern for others is a core value. We value strong and nurturing faculty interacting closely with students; encourage individual student development; and affirm the interrelatedness of liberal learning and the ideal of vocation. We regard the cultivation of wisdom, that is the capacity of judging rightly in manners of life and conduct, and a life-long love of learning as the ultimate rewards of the educational experience.

The motto of the college is, "You shall know the truth and the truth shall set you free"
(John 8:32).



President G. David Pollick meets with students for an informal discussion.

UNDERGRADUATE INFORMATION

Admission For Full Time Students

High School Preparation

All admission candidates should have completed 16 credit units and graduated from an accredited secondary school, or present an equivalency certificate (G.E.D.). Of the 16 units, 4 should be in English, 2 in foreign language, 2 in mathematics, 1 in science and 1 in social studies.

Application Procedure

A candidate for admission to Lebanon Valley College must submit a completed application form with the required application fee, Scholastic Aptitude or American College Test results and an official transcript of high school grades. Students planning to transfer to Lebanon Valley must submit official transcripts of completed college or university work.

All candidates are encouraged to visit campus for a personal interview. Applicants for admission into music, music education or music technology programs are required to audition on campus; audition applications are available from the Admission Office. For further information contact:

Admission Office

Lebanon Valley College
101 North College Avenue
Annville, PA 17003-0501
Phone: (717) 867-6181 or (800) 445-6181
FAX: (717) 867-6026
Internet: <http://www.lvc.edu>
E-mail: admiss@lvc.edu

Student Finances

Payment for tuition, room, board, and other charges is due by a published deadline prior to the beginning of each semester. Students failing to meet this deadline will be required to make special arrangements with the Business Office before their course registrations will be processed. Questions about student finances should be addressed to the Business Office.

Refund Policy

Full-time students withdrawing from the school will receive a refund prorated according to the following schedule:

<u>Time Period</u>	<u>Refund</u>
During the first week of classes	100%
During the second week of classes	90%
During the third and fourth week of classes	50%
During the fifth through eighth week of classes	25%

After the eighth week of classes
Comprehensive Fee: non-refundable
Room charges: non-refundable
Board charges: prorated refund

NO REFUND

A \$100 Administrative Fee will be assessed for withdrawals after the first week of class.

Part-time students should consult the refund schedule published by the Continuing Education Office.

Refund Policy During First Semester

A student who is attending Lebanon Valley College for the first time will receive a refund according to the federal policy established by the Higher Education Amendments of 1992. The pro-rata refund policy applies to new students whose date of withdraw is within the first 60 percent of the semester for which the student has been billed. This refund policy allows for a refund of tuition, fees, room and board for the portion of the semester for which the student has been charged that remains in this period but for which the student will not be enrolled. A copy of the federal pro-rata refund policy is on file in the Financial Aid Office.

Alternative Payment Plan

Lebanon Valley College offers a payment plan for those families who, after exploring other options, prefer to spread payments over a 10-month period. Two agents have been appointed to process deferred payment applications:

Knight College Resource Group
855 Boylston Street
Boston, MA 02116
Phone: 1-800-225-6783

EduServ Tuition Installment Plan
EduServ Technologies, Inc.
P.O. Box 3011
Winston-Salem, NC 27102-3011
Phone: 1-800-851-4770

The college has no financial interest in either of these plans and offers them as a convenience to students and parents.

Continuing Education Office

Students may enroll part-time at Lebanon Valley College through Continuing Education. Students are considered part-time if they are enrolled for 0 – 11 credit hours per semester. The Continuing Education Office offers credit programs on four levels: certificate, associate, baccalaureate, and diploma. Certificates are starter programs that approximate the beginning of a four-year college experience, ideal spring-boards from which to go on for an associate or bachelor's degree. Diploma programs are intended for persons who have already been awarded a bachelor's degree in one discipline and desire to study another discipline in some depth.

A second bachelor's degree may be awarded to adult students who already have received a bachelor of arts or sciences from Lebanon Valley or another accredited college or university.



Continuing education courses are offered in Annville and through the Lancaster Center.

In such cases, students must only complete the major requirements for the second degree or a minimum of 30 credits, whichever is greater.

Courses taught through Continuing Education are offered during evenings, weekend and summer sessions on the main campus in Annville and through our Lancaster Center on the Franklin & Marshall College Campus. The Continuing Education Office publishes course schedules for the fall, spring and summer sessions. To obtain copies of course schedules or get detailed information on all academic programs for adults call 717-867-6213 in Annville or 717-399-4419 in Lancaster or write Continuing Education Office, Lebanon Valley College, Annville, PA 17003-0501.

A candidate for admission to any of Lebanon Valley College's Continuing Education degree programs must submit a completed application form with the required application fee. An official high school transcript is required if students have less than 24 semester hours of transferable college credits. Students planning to transfer to Lebanon Valley must submit official transcripts of any completed college or university courses. Official transcripts relating to military or business courses also may prove to be useful. Although students may begin taking classes before they have been accepted, they must speak with a counselor before registering for courses. To arrange an admission interview with a counselor call 717-867-6213 in Annville or 717-399-4419 in Lancaster. Decisions on all adult student applications usually are made within one month after the last required transcript is received.

UNDERGRADUATE ACADEMIC REGULATIONS AND PROCEDURES

Attendance at Lebanon Valley College is a privilege, not a right. To provide the necessary atmosphere in which teaching and learning can occur, the college expects that the conduct of all campus citizens will conform to accepted standards. The college has the right to require the withdrawal of any student whose actions are inimical to the purposes of the institution. The following academic regulations are announcements and do not constitute a contract between the student and the college. The college reserves the right to change these regulations and procedures as it deems necessary for the accomplishment of its purposes, but wherever possible, a student will proceed to graduation under the regulations in effect at the time of his/her entrance at the college.

Degrees

Baccalaureate Degrees

Lebanon Valley College confers five baccalaureate degrees. Bachelor of Arts for students completing requirements in the following major programs: American studies, economics, English, French, German, history, music, philosophy, political science, psychology, religion, sociology, Spanish and certain individualized majors.

Bachelor of Science for students completing requirements in the following major programs: accounting, actuarial science, biochemistry, biology, business administration, chemistry, computer information systems, computer science, cooperative engineering, cooperative forestry, elementary education, health care management, hotel management, international business, mathematics, music education, physics, psychobiology, and certain individualized majors. Bachelor of Science in Chemistry, Bachelor of Science in Medical Technology, and Bachelor of Music: Emphasis in Music Recording Technology for students completing requirements for the appropriate major program.

Associate Degrees

Through the Continuing Education Office part-time students may earn the Associate of Science degree in accounting, general studies or management, or the Associate of Arts degree in general studies.

Privacy of Student Records

The Family Educational Rights and Privacy Act of 1974 is a federal law which provides students the right to review their academic records, the right to challenge the contents of their records, and the right to confidentiality of their records.

The Buckley Amendment allows the disclosure of basic directory data and, in the case of athletes, extends that information to relevant personal data and accomplishments. The College Relations Office uses permissible information from students' records to report on social and academic accomplishments.

Annually, Lebanon Valley College informs students of the Family Educational Rights and Privacy Act of 1974, as amended. This Act, with which the institution intends to comply fully, was designated to protect the privacy of education records, to establish the right of students to inspect and review their education records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students also have the right to file complaints with the Family Educational Rights and Privacy Act Office (FERPA) concerning alleged failures by the institution to comply with the act.

Local policy explains in detail the procedures to be used by the institution for compliance with the provisions of the Act. Copies of the policy can be found in the following offices: Office of the Registrar, Office of Student Services and Office of the Dean of the Faculty. The policy is also printed in the Faculty Advising Handbook. The offices mentioned also maintain a Directory of Records which lists all education records maintained on students by this institution.

Questions concerning the Family Educational Rights and Privacy Act may be referred to the Registrar's Office.

Credit Hours

A credit hour is the unit to measure academic progress. Each course has a credit designation approximately equal to the number of hours to be spent in class each week. A course requiring three hours of class attendance each week will carry three credit hours. Credit for laboratories is generally awarded at one-half the regular rate.

Graduation Requirements

Candidates for a baccalaureate degree shall complete successfully 120 credit hours including the requirements for the general education program (see page 19), and the requirements for majors and minors as appropriate. Credit hours are accumulated in three separate categories: general education requirements, major requirements, and electives.

In addition, candidates shall complete successfully two units of physical education selected from a list of approved activities. Students shall not satisfy the physical education requirement by taking the same activity unit twice. Students shall have a maximum of one physical education unit waived for successful completion of any of the following: one season of a varsity sport, one semester of marching band, or one semester of military science. Continuing education students are exempt from the physical education requirement.

Candidates for an associate's degree must accumulate at least 60 credit hours including the course work appropriate to their major program. Fifteen of the last 18 credit hours toward the degree must be in residence.

Candidates for a degree must obtain a cumulative grade point average of 2.00 and a major grade point average of 2.00.

The general education program is that part of the curriculum that is shared by all students in all majors. The required courses reflect 54-56 credit hours.

The major programs each require at least 24 credit hours of course work.

Electives are those courses selected by the student that reflect neither major nor general education requirements.

Candidates for the bachelor's degrees must also take in residence 30 credit hours of the 36 taken immediately prior to graduation. Course work taken in all of the college's programs qualify as work done in residence.

Advising Program

Each student has a faculty adviser whose role is to counsel about registration procedures, course selections, academic requirements, and regulations. The student is required to obtain the adviser's counsel and approval before registration, withdrawal, election of pass/fail option, and/or change in credit/audit status.

Arrangement of Schedules

Each student arranges a semester program of courses in consultation with, and by approval of, his or her faculty adviser. Students already in attendance do this during registration periods. New students accomplish this on orientation days.

Limit of Hours

To be classified as full time, a student must take at least 12 credit hours in a semester. Seventeen credit hours is the maximum permitted without approval from the student's adviser and permission of the registrar. Audited courses are counted in determining the course load, but music organizations are not. To be permitted to take more than 17 credits the student should have a cumulative grade point average of 3.0 or higher, or be a senior. Students shall pay the prevailing tuition rate for each credit hour beyond 17 (not counting music organizations).

Class Standing

Students are classified academically at the beginning of each year. Membership in the sophomore, junior or senior classes is granted to students who have earned a minimum of 28, 56, or 84 credit hours respectively.

Transfer Credit

A student applying for advanced standing after having attended another accredited institution shall send an official transcript to the dean of admission. If requested, the student must provide copies of the appropriate catalogs for the years of attendance at the other institution or institutions.

Credits are accepted for transfer provided the grades are C- (1.67) or better and the work is equivalent or similar to work offered at Lebanon Valley College. Grades thus transferred count for credit hours only, not for quality points.

A candidate for admission holding an associate degree from a regionally accredited college can be admitted with full acceptance of course work at the previously attended institution. Course work in the major field, however, for which the applicant has received a D shall not be counted toward fulfilling the major requirement.

Because Lebanon Valley College is a liberal arts institution, consideration of full acceptance of the associate degree will be granted with the understanding that the candidate has followed a basic course of study compatible with the curriculum and academic programs of the college and has been enrolled in a transfer program. A total of 60 credits will be accepted for an associate degree and 57 credits for a diploma program. A maximum of 90 credit hours will be accepted toward a baccalaureate degree.

In most instances the applicant may be expected to complete the baccalaureate degree within two years. However, when the requirements of a particular major field or the nature of the previous study demand additional work beyond two years, the applicant will normally be notified at the time of admission.

Discontinuance of Courses

The college reserves the right to withdraw or discontinue any course.

Registration and Preregistration

Students are required to register for courses on designated days of each semester. Preference is given to upperclass students in the preregistration process to ensure registration in courses required for their major fields of study. Students who register later than the designated times shall be charged a fee. Students desiring to register later than one week after the opening of the semester will be admitted only by special permission of the registrar.

On entering Lebanon Valley College students indicate that they are open or that they have a particular intended major. Students may make a formal declaration of major during the second semester of their freshmen year, and must make a formal declaration by the time they have completed 60 credit hours.

Change of Registration

Change of registration, including pass/fail elections, changes of course hours credit, changes from credit to audit and vice versa, must be approved by signature of the adviser. In most instances, registration for a course shall not be permitted after the course has been in session for one full week. With the permission of the adviser, a student may withdraw from a course during the first ten (10) weeks of the semester. However, first semester freshmen may withdraw from a course at any time through the last day of semester classes with permission of the adviser. A fee is charged for every change of course made at the student's request after Add/Drop Day.

Auditing Courses

Students may register to audit courses with the approval of their academic adviser. Audited

courses are counted in considering the course load relative to the limit of hours which may result in an overload charge. No grade or credit is given for an audited course, but the registrar will record the audit on the transcript if the student attends regularly. A change of registration from credit to audit or from audit to credit must be accomplished by the end of the tenth week of semester classes.

Pass/Fail

After attaining sophomore standing (28 credit hours) a student may elect to take up to two courses per semester and one per summer session on pass/fail basis; however, only six such courses can be counted toward graduation requirements. No courses elected by students to be taken pass/fail may be used to meet the requirements of the general education program, the major(s), the minor(s), and secondary education certification. A student may select or cancel a pass/fail registration any time during the first 10 weeks of a semester. Passing with honors will be designated by the grade PH indicating that a grade of B+ or higher was earned.

Repetition of Courses

A student may repeat as often as desired, for a higher grade, a previously taken course, subject to the following provisions: the course must have been taken in courses staffed by the college at the Annville campus and/or the Lancaster center or Pennsylvania School of Art & Design in Lancaster. Semester hours credit are given only once. The grade received each time taken is computed in the semester grade point average. Each semester grade report will show hours credit each time passed, but the total hours toward a degree will be equal only to the semester hours credit for the course. For a course previously passed P/F, the grade received in the subsequent registration for regular grade is the "higher grade." Each grade received remains on the permanent record and a notation is made thereon that the course has been repeated.

Concurrent Courses

A student enrolled for a degree at Lebanon Valley College may not carry courses concurrently at any other institution without prior consent of his or her adviser and the registrar.

External Summer Courses

A student registered at Lebanon Valley College may not obtain credit for the courses taken during the summer at another college, unless such courses have prior approval of his or her adviser and the registrar.

Attendance Policy

Each student is responsible for knowing and meeting all requirements for each course, including regular class attendance. At the opening of each semester the instructors shall clearly inform students of class attendance regulations. Violations of those regulations shall make the student liable to receive a grade of F in the course. Upon the recommendation of the instructor and the approval of the registrar a grade of W will be assigned during the first 10 weeks of the semester, and an F will be assigned after that date.

Excused absences do not absolve students from the necessity of fulfilling all course requirements.

In-Absentia

The college treats students in domestic or foreign study programs and in the Washington Semester Program as students-in-absentia. Any student who studies for a semester or academic year at another institution but with the intent of returning to the college is considered a matriculated student. A student desiring in-absentia status should complete the form in the registrar's office and secure the approval of the adviser, the registrar and the dean of international programs. Students will receive information on registration and room sign-up after they notify the registrar of their address abroad or in the United States.

Leave of Absence

For reasons of health or in other compelling circumstances students may request a voluntary leave from the college for one or two semesters. A student desiring such a leave should complete the form available from the registrar and secure the approval of the senior vice president and dean of the faculty. Students on leave are regarded as continuing students and retain their status for registration or room sign-up. Students on leave will receive information on those procedures and will be asked to verify their return. The college reserves the right to require a leave of absence for medical reasons at any time it is deemed reasonably necessary to protect the student, other students, members of the college community, or the interests of the college itself. Before a student returns from a medical leave of absence, a clearance interview with one of the counseling psychologists, the dean of students or the senior vice president and dean of the faculty as well as additional documentation may be required.

Withdrawal from College and Readmission

To withdraw from college a student must complete an official withdrawal form obtained from the registrar. Continuing education students must complete an official withdrawal form obtained from the director of continuing education. Readmission of a student requires written permission from the senior vice president and dean of the faculty.

Advanced Placement

Advanced placement with credit for appropriate courses shall be granted to entering students who make scores of 4 or 5 on College Board Advanced Placement examinations. For scores of 3, final determination is made by the appropriate department. Advanced placement without credit may be granted on the basis of the Achievement Tests of the College Board examinations or such other proficiency tests as may be determined by the registrar and by the chairperson of the department.

Second Bachelor's Degrees

A person who has earned a bachelor's degree from Lebanon Valley College or another accredited college or university may earn a second bachelor's degree by meeting the following requirements:

1. A minimum of 30 additional undergraduate credits must be completed successfully at Lebanon Valley.
2. All graduation requirements for the major of the second degree must be met satisfactorily.

3. Course work completed successfully as part of the first degree program may be used to satisfy the graduation requirements of the second major.
4. No course already taken in the first degree program may be repeated in the second degree program.
5. No more than three credits from student teaching (SED 440, ELM 440 and MSC 441) may be counted toward a second degree.
6. Graduates from other accredited colleges or universities shall not be required to meet any Lebanon Valley general education requirements.
7. No courses in the second degree program may be met satisfactorily through such non-traditional means as challenge examinations, CLEP, or credit for life experience.
8. No more than three credits from internships may be counted toward a second degree.
9. No courses in the second degree program may be taken Pass/Fail.

Undergraduate Non-Traditional Credit

Lebanon Valley College recognizes the ability of highly motivated students to master specific areas of study on their own initiative and provides programs to allow these students the opportunity to gain credit. Any matriculated student may earn a maximum of 30 credits toward a bachelor's degree or a maximum of 15 credits toward an associate's degree through non-traditional means (experiential credit, advanced placement, CLEP, challenge exams).

Challenge Exams Policy

Only the courses listed in the college curriculum may be challenged for credit. Full-time students should request challenge examinations through their academic advisers. Part-time students and those students enrolled through the continuing education program should make application of challenge exams through the Continuing Education Office. All requests must be approved by the registrar and the chairperson of the department in which the course is listed.

Challenge exams are considered to be comprehensive examinations in the subject area and are graded Pass/Fail. The grading criteria for passing a challenge exam shall be determined by each department. There is a fee for each challenge examination. This fee is for preparation and grading of the examination and is charged without regard to the test results. Challenge exams may not be taken by students who have received any grade in a course equivalent to or more advanced than the course for which the student is requesting credit by examination. Challenge exams may not be used for the purpose of acquiring credit for a course previously failed. Practicums, internships, seminars, research courses, independent study, and courses with required laboratory components are not subject to credit by examination.

CLEP (College Level Examination Program) Policy

Credit shall be granted to those students who score well on CLEP examinations that are approved by the college. To receive credit, a student must score above the 50th percentile on the objective section and above a C, as determined by the appropriate academic department for general and subject examinations. The English composition essay is required with a minimum score of 480 and at the 80th percentile for this CLEP examination.

A maximum of six credits shall be awarded for each examination; of these credits, only three may be applied to the general education requirements in the appropriate area. Credit shall be granted only to students who have matriculated at Lebanon Valley College. Normally, requests for CLEP credit must be approved by the registrar before the student has completed 30 credits.

Credit for Life Experience Policy

Lebanon Valley College provides for the awarding of undergraduate academic credit for knowledge acquired through non-academic experience in subjects in the college curriculum. The experience should have a direct relation to the material taught in a course in the college curriculum and should extend over a sufficient period to provide substantive knowledge in the relevant area. Matriculated students who believe they qualify for such credit may petition the appropriate department through their academic advisers. Students enrolled in the Continuing Education program must petition through the Continuing Education Office. This petition must:

- (1) detail the relevant experience in question
- (2) provide appropriate supporting evidence
- (3) note the equivalent college course by department and number
- (4) state the number of credit hours sought.

The appropriate department will consult with the academic adviser or the Continuing Education Office to determine the best means (interview, examination, portfolio, etc.) for evaluating the experience.

Approval of experiential credit for full-time students must be made in writing over the signatures of the academic adviser, the appropriate department chairperson, and the senior vice president and dean of the faculty. Approval of experiential credit for students enrolled through the continuing education program must be made in writing over the signatures of the director of continuing education, the appropriate department chairperson, and the senior vice president and dean of the faculty.

Experiential credit cannot exceed six credit hours in one academic year and cannot exceed a maximum of twelve credit hours in the degree program.

Grading Systems and Grade Point Averages

Student work is graded A (excellent), B (good), C (satisfactory), D (requirements and standards met a minimum level), F (course requirements not met). For each credit hour in a course, students receive the following quality points:

A	4.00	C	2.00
A-	3.67	C-	1.67
B+	3.33	D+	1.33
B	3.00	D	1.00
B-	2.67	D-	.67
C+	2.33	F	.00

F carries no credit or quality points, but grades of F are used in calculating the grade point averages. The cumulative grade point average is calculated by dividing the quality points by the credit hours completed.

Candidates for a degree must obtain a cumulative grade point average of 2.00, and a major grade point average of 2.00.

Continuing education degree candidates admitted before July 1, 1989 must meet graduation requirements by earning a cumulative grade point average of 1.75. All students and continuing education candidates admitted after July 1, 1989 must meet graduation requirements by earning a grade point average of 2.00. All students must have a 2.00 grade point average in their major, any second major, and any minor.

A student may not take a course that has a prerequisite course he/she has failed.

In addition to the above grades, the symbols I and W are used. I indicates that the work is incomplete (certain required work postponed by the student for substantial reason with the prior consent of the instructor), but otherwise satisfactory. This work must be completed within the first eight weeks of the next semester, or the I will be changed to an F. Appeals for an extension of time must be presented to the registrar by the first week of the next semester. W indicates withdrawal from a course through the tenth week of semester classes, except for first-semester freshmen who may withdraw through the last day of the semester. For physical education a grade of either S (satisfactory) or U (unsatisfactory) is recorded.

Once a grade has been recorded it may not be changed without the approval of the instructor and the registrar. Students who feel the grade may be inaccurate should contact the instructor at once, but in no case later than the end of the semester following the course in question.

Grades are sent to the parents and/or guardians of full-time students who meet the Internal Revenue Service regulations for dependent status. Independent full-time students must notify the registrar and provide adequate documentation of their status.

Academic and Graduation Honors

The Dean's List

Students achieving a 3.40 or higher grade point average while carrying at least 12 credit hours for grade shall be named to the Dean's List at the end of each semester.

Continuing education students shall be named to the Continuing Education Dean's List by meeting the following terms:

- (1) must be matriculated in certificate, degree or teacher certification programs
- (2) must be enrolled for at least six credit hours
- (3) must achieve a minimum semester grade point average of 3.40.

Graduation Honors

After completing a minimum of 60 credit hours of residence work a student may qualify for graduation honors. The honors to be conferred are Summa Cum Laude for grade point averages of 3.75 – 4.0, Magna Cum Laude for grade point averages of 3.60 – 3.74, and Cum Laude for grade point averages of 3.40 – 3.59.

Departmental Honors

All major programs provide the opportunity for departmental honors work during the junior and senior years. For specific information, interested students should contact the appropriate department chairperson. The minimal requirements for departmental honors are a cumulative GPA of at least 3.0, both at the time of application and the time of graduation; a written thesis; an oral presentation; and approval by a majority vote of the full-time members of the department. This project is undertaken on a subject of the student's own choosing under the supervision of a faculty adviser. Opportunity also exists to do creative work. A maximum of nine hours credit may be earned in departmental honors.

Phi Alpha Epsilon

Students graduating with grade point averages of 3.50 or higher are eligible for induction into Phi Alpha Epsilon, provided they have earned a minimum of 60 credit hours of residence work.

Academic Dishonesty

Students are expected to uphold the principles of academic honesty. Academic dishonesty shall not be tolerated. Once action has been taken on a matter of academic dishonesty, the student forfeits the right to withdraw from the course.

For the first academic dishonesty offense, no action shall be taken beyond failure from the course, at the option of the faculty member. A letter of warning shall be sent to the student by the senior vice president and dean of the faculty, explaining the policy regarding further offenses, and the right of appeal.

For a second offense, failure in the course is mandatory, and the dean shall so inform the faculty member(s) involved. Additionally, the senior vice president and dean of the faculty has the authority to take further action, up to and including expulsion from the college.

For a third offense, failure in the course and expulsion from the college are mandatory.

The senior vice president and dean of the faculty has the authority to make a determination of whether actions or reasonable suspicions of actions by a student constitute academic dishonesty "offenses" as above.

Information related to academic dishonesty offenses must be passed by the faculty member to the senior vice president and dean of the faculty. The dean shall retain the information for at least as long as the student involved is enrolled at the college. Information and evidence concerning academic dishonesty are the property of the college.

All actions against a student for academic dishonesty offenses can be appealed to the senior vice president and dean of the faculty, who will serve as final arbiter.

Probation and Suspension

Students can be placed on academic probation, suspended or dismissed if their academic standing fails to come up to the grade point average shown in the following table:

Semester <u>Hours</u>	<u>Probation</u>	Suspension or <u>Dismissal</u>
1 – 18	1.50	
19 – 36	1.60	1.50 cumulative
37 – 54	1.70	
55 – 72	1.80	1.70 cumulative
73 – 90	1.90	
91 or more	2.00	1.90 cumulative

A student placed on academic probation is notified of such status by the senior vice president and dean of the faculty and informed of the college regulations governing probationers. Students on probation are expected to regulate their work and their time in a most determined effort to bring their performances up to the required standard. A student on probation who desires to begin a new activity or continue in an activity already begun, shall submit an appeal to the senior vice president and dean of the faculty. After consultation with the student's major adviser and parents, the senior vice president and dean of the faculty will render a binding decision.

A student suspended for academic reasons normally is not eligible for reinstatement for one semester. A student seeking reinstatement must petition in writing to the senior vice president and dean of the faculty.

A student twice suspended shall be considered for readmission only after completing appropriate academic work at an accredited college.

Veterans' Services

Veterans who are eligible to receive educational benefits must report their enrollment to the registrar after they register for each semester or summer session. The registrar will then submit certification to the Veterans Administration.

Veterans who are attending Lebanon Valley College for the first time must complete the appropriate forms in the registrar's office before certification will be sent to the Veterans Administration.

Students eligible for veterans benefits who remain on academic probation for two consecutive semesters must be reported to the Department of Veterans Affairs. Veterans with questions about the college or their status with the college should contact the registrar.

Servicemember's Opportunity Colleges

Lebanon Valley College has been designated as an institutional member of Servicemember's Opportunity Colleges (SOC), a group of over 400 colleges providing post secondary education to members throughout the world. As an SOC member, Lebanon Valley College recognizes the unique nature of the military life-style and has committed itself to easing the transfer of relevant course credits, providing flexible residency requirements, and crediting learning from appropriate military training and experiences.

Teacher Certification for Non-Matriculated Students

Lebanon Valley College offers teacher certification to a variety of special students: students with degrees from other colleges, or teachers seeking certification in other fields, or Lebanon Valley College alumni seeking certification for the first time. All students must present official transcripts of college work or their previous teacher certification to the registrar. The Education Department, the registrar and the appropriate academic department shall evaluate the record and recommend the appropriate course of action. A fee shall be charged for this service.



Small classes ensure one-on-one interaction with faculty.

UNDERGRADUATE ACADEMIC PROGRAMS

General Education Program

Through the General Education Program the college most directly expresses its commitment to the ideal of liberal education that underlies its statement of purpose. The program has four components: communications, liberal studies, foreign studies and disciplinary perspectives. This program seeks to prepare graduates who are broadly competent, skilled in communication, capable of analysis and interpretation, tolerant and able to continue to learn in a rapidly changing world.

The General Education Program aims to help students:

- strengthen their capacities for critical thinking and rational analysis;
- practice clear and effective communication;
- learn methods essential for study and research;
- develop breadth through fundamental studies in basic liberal arts disciplines;
- improve their ability to make informed aesthetic and moral assessments;
- understand and appreciate cultures and traditions different from their own;
- integrate different ways of learning and understanding.

The program consists of coursework in the following four areas:

Communications. 15 credit hours.

- English Communications (2 courses)
- Writing Requirement (3 courses)
- Electronic Information Proficiency

This component recognizes the central role communication plays in learning and in life. Courses teach the principles of clear and effective communication and provide opportunities to practice and refine them throughout the student's college career.

English Communication. Courses teach the elements of English composition and the related skills of speaking, reading, listening, word processing, and bibliographic access through database searching.

Requirement: ENG 111/112.

Writing Requirement. In addition to English communication, students must complete three courses designated Writing Intensive preferably during the sophomore, junior and senior years. In these courses faculty will also teach writing and will make evaluation of writing quality an important factor in the course grade.

Requirement: Three courses from an approved list.

Approved: AMS 253; BIO 307, 312, 322; BUS 230, 420, 425, 480, 485; CHM 222, 321, 322; ECN 312, 321, 332, 401, 411; ELM 361, 499; ENG 213, 221, 222, 225, 226, 310, 315, 330, 341, 342, 350, 360; FRN 410, 420, 430, 440, 450; GPY 212; GMN 400-419, 460; HIS 205, 206, 207, 225, 226, 227, 253, 261, 262, 325, 326; MRT 371, 372; MSC 120, 334; PHL 215, 220, 300, 301-335, 336, 337, 349; PHY 328; PSC 220, 350; PSY 210, 321, 335, 339, 343, 443; REL 311, 312, 322, 337; SOC 322, 324, 331, 333, 362, 382; SPA 310, 410, 420, 430, 440, 450, 460.

Electronic Information Proficiency. There is no specific computer course requirement. Courses in the General Education Program will build on the base established in English Communications to include other computer applications and modes of information access and retrieval as appropriate.

Liberal Studies. 27-29 credit hours.

Three courses in each group with at least one course from each area.

Group I	Group II	Group III
History	Natural Science	Literature and Fine Art
Social Science	Mathematics	Religion and Philosophy

Courses in this component provide breadth by introducing fundamental concepts, methods, and content in disciplines essential to a liberal education.

Requirement: Three courses from each group with at least one from each area.

Group I

Area 1: History. Courses acquaint students with historical methodology and with some of the principal developments in European and American history.

Approved: AMS 111; HIS 101, 102, 111, 112, 125, 126, 311.

Area 2: Social Science. Courses establish and explore patterns of human culture and social organization including international aspects of the world by examining the relationships among individuals and the structures and processes of societies. They draw on the theories and methodological approaches used in the social sciences and prepare students to evaluate, integrate, and communicate information and issues related to human behavior.

Approved: ECN 100, 101; PSC 111, 112, 130, 160; PSY 100; SOC 110, 120.

Group II

Area 3: Natural Science. Courses present findings, concepts, and theories of science, develop an understanding of scientific methods of inquiry, engage students directly in the practice of science, and prepare them to understand the relationship between science and technology.

Approved: BIO 101, 102, 103, 111, 112; CHM 100, 111/113, 112/114; PHY 100, 103, 104, 111, 112; PSY 210; SCI 100.

Area 4: Mathematics. Courses introduce pivotal mathematical ideas, abstract mathematical constructs, and mathematical applications. They make students aware of the powers and limitations of mathematics and emphasize the role of mathematics in our society.

Approved: MAS 100, 111, 112, 150, 161, 162, 170, 270.

Group III

Area 5: Literature and Fine Art. Courses acquaint students with significant works of artistic expression and with their historical and cultural contexts. They help them analyze and appreciate works of art, music, and literature and seek both to extend their aesthetic experience and enhance the quality of their critical judgment.

Approved: ART 110, 201, 203, 207; ENG 120, 221, 222, 227, 228, 229; GMN 420, MSC 100, 120, 200, 342.

Area 6: Religion and Philosophy. Courses introduce major religious or philosophical perspectives, the critical study of value judgments, and the understanding that all judgments and value systems are grounded in particular world views. Students are encouraged to examine their own moral commitments as they develop an awareness of and tolerance for other value systems.

Approved: PHL 110, 160, 230, 240; REL 110, 120, 160, 230.

Foreign Studies. Nine credit hours.

Two courses in a foreign language.

One course from a list approved for this component.

This component responds to a contemporary world in which communication, travel and trade increasingly juxtapose cultures, values and ideas. Courses help students understand, interpret, and appreciate cultural, social, moral, economic and political systems different from their own.

Foreign Language. By learning another language students see the world from a perspective essentially apart from their native tongue and culture. These courses help students understand that all languages solve similar problems of expressing thought, but that each language provides special access to a particular human society.

Requirement: Two courses.

Options: 1. Continue a previously studied language (two or more years) at the intermediate level. FRN, GER, RSN, SPA 201/202.

2. Begin a new language. FRN, GMN, RSN, SPA 101/102.

3. Repeat the elementary level (no language study for five full years), (FRN, GMN, RSN, SPA 101/102).
4. Complete one advanced course (requires permission from FLG department).

Foreign Studies. Courses introduce important aspects of societies in Asia, Africa, the Middle East, and the Americas to foster an understanding of cultural, social, political, religious, or economic systems outside the European tradition. Courses may compare European societies with other societies or address factors that influence culture as long as these other considerations do not obscure the primary goal of studying essentially different cultures.

Requirement: Choose one course from an approved list.

Approved: HIS 271, 273, 275, 277, 279; PHL 251, 252; PSC 140, 150, 211; REL 115, 116, 253, 260, 265; SPA 460.

Disciplinary Perspectives. Three credit hours.

One course from a list approved for this component.

Certain problems are addressed best from the perspective of more than one discipline. This component offers students an opportunity to bring the insights from different disciplines to the analysis of a complex issue. Courses incorporate content and approaches from at least two disciplines, ask students to draw on their own disciplinary perspectives, and challenge them to view issues from various points of view. Junior or senior standing is required.

Requirement: one course from an approved list.

Approved: AMS 311; DSP 390; HIS 325, 326; PHL 337, 342, 349; PSY 350; REL 332, 337, 342; SOC 326.

Interdisciplinary Course (DSP):

DSP 390. Special Topics. This number designates a special topics course in the disciplinary perspectives component of the General Education Program. Faculty may make use of this opportunity to design a course outside normal departmental offerings. The course selection booklet which appears before registration each semester will describe individual courses in this category. 3 credits.

A student may petition the senior vice president and dean of the faculty to substitute another course in the curriculum for an approved course in any component of the program.

Cooperative Programs

Allied Health Professions

Lebanon Valley College has established a cooperative program with Thomas Jefferson University in Philadelphia, Pa., for students interested in the allied health professions. The College of Health Professions of Thomas Jefferson University offers baccalaureate programs in cytotechnology, cytogenetics, diagnostic imaging (radiography/ultrasound), nursing, and occupational therapy, and also offers an entry-level master's program in physical therapy.

Students spend two years at Lebanon Valley College taking required courses in the basic sciences and other disciplines. During the second year, application is made to Thomas Jefferson University. Admission to Thomas Jefferson University is not automatic, and depends upon the academic record, recommendations and often an interview. If accepted, the student spends two years (three years for physical therapy) at Thomas Jefferson University taking professional and clinical courses. Upon successful completion of the program, the student is awarded a baccalaureate degree (or master's, for physical therapy) by Thomas Jefferson University.

Engineering

In the cooperative "3+2" engineering program a student earns a B.S. degree from Lebanon Valley College and a B.S. degree in one of the fields of engineering from another institution. Students may study engineering at any accredited engineering school. To assist the student, Lebanon Valley has special cooperative agreements with Case Western Reserve University, Cleveland, Ohio; University of Pennsylvania, Philadelphia; and Widener University, Chester, Pa. Students who pursue this cooperative engineering program take three years of work at Lebanon Valley College and then usually take two additional years of work in engineering.

Forestry and Environmental Studies

Students completing a three-year program at Lebanon Valley College studying the liberal arts and the sciences basic to forestry and environmental sciences may apply for admission to the cooperative forestry and environmental studies program with Duke University, School of the Environment, Durham, N.C. Upon completion of the first year of the two-year (plus one summer) program at Duke University, the student will receive the Bachelor of Science degree from Lebanon Valley College. After completion of the program at Duke, the student will receive the professional degree of Master of Forestry (M.F.) or Master of Environmental Management (M.E.M.) from Duke University. Students may major in biology, economics, political science, or mathematics at Lebanon Valley College.

Program Requirements:

Students interested in pursuing career preparation in forestry or in environmental studies through the cooperative program ("3+2") with Duke University may major in biology, economics, political science or mathematics at Lebanon Valley. All such students shall take BIO 111, 112, 302; ECN 101, 102; MAS 161 or 111; MAS 170, regardless of major, and shall meet the general requirements of the college.

Medical Technology (Clinical Laboratory Science)

The student spends three years at Lebanon Valley College taking courses to fulfill the requirements of the college and of the National Accrediting Agency for Clinical Laboratory Sciences. Before or during the third year of the program, the student applies to a hospital with a CAHEA approved school of medical technology where he/she spends the fourth year in training. Admission is not automatic and depends upon the academic record, recommendations and an interview. Upon satisfactorily completing the clinical year, the student is awarded the degree of Bachelor of Science in Medical Technology by Lebanon Valley College. The college is affiliated with the following hospitals: Polyclinic Hospital of Harrisburg, Jersey Shore Medical Center, and Lancaster General Hospital. However, the student is not limited to these affiliations and may seek acceptance at other approved hospitals.

Degree Requirements:

Degree: Bachelor of Science in Medical Technology

Major: BIO 111, 112, 306, 322, eight additional credits in biology; CHM 111, 112, 113, 114, 213, 214, 215, 216; PHY 103, 104; MAS 170 (51 credits). The senior year is spent off-campus at an accredited hospital school of medical technology. It is the student's responsibility to apply and become accepted into a hospital program. Thirty (30) semester hours of credit are awarded for the successful completion of this year.

Pre-Professional Programs

Pre-Law Program

Although there is no pre-law major or department, a pre-law student is advised to take certain courses which will help prepare him or her for law school and a legal career. Each student should confer with the pre-law adviser in selecting a specific pattern of courses appropriate to that student's objectives. Generally recommended courses are as follows: ACT 161; BUS 371, 372; ECN 101, 102; PSC 111, 112, 315, 316, and 415.

Pre-Medical, Pre-Dentistry, Pre-Veterinary

Lebanon Valley College offers pre-professional preparation in the medical (medicine, osteopathy, optometry, podiatry, pharmacy, chiropractic and dentistry) and veterinary fields. Students interested in one of these careers usually follow a science curriculum with a major in biochemistry, biology, chemistry or psychobiology.

In addition to the basic natural sciences suited to advanced professional study, the student who is interested in veterinary medicine may participate in a cooperative program between the college and local veterinarians, specializing in both small and large animal medicine. Students not only receive credit for the work, but also gain valuable experience in the field.

A health professions committee coordinates the various plans of study in addition to offering advice and assistance to those persons interested in health professions careers.

Lebanon Valley College graduates have been admitted to some of the nation's finest schools including Johns Hopkins University Medical School, The University of Pennsylvania, The University of Pittsburgh, Jefferson Medical School, The Milton S. Hershey Medical Center, Temple University, The University of Maryland, The Philadelphia College of Osteopathic Medicine, The Pennsylvania College of Podiatric Medicine and the Pennsylvania College of Optometry.

Individualized Major

The option of an individualized major is available to students who desire a field of concentration which is not substantially addressed by any one department. The faculty represents a diverse set of interests and perspectives that provides a considerable resource for those students who would like to develop a major around concerns that do not fall into traditional disciplinary areas. As a liberal arts institution, the college and its faculty are willing to help a student develop a program of study using interdisciplinary courses.

A student planning an individualized major should prepare an application which includes courses relevant to the topic and secure the written endorsement of at least two faculty advisers for the proposed major which shall consist of at least 24 credits above the 100 level.

The student should submit the application to the senior vice president and dean of the faculty for final approval. The student will work closely with the advisers. Any changes in the program must be submitted to the dean for approval.

Degree: Bachelor of Arts or Bachelor of Science degree (depending upon concentration) with an individualized major.

Requirements: Those courses specified within the approved individualized major plus those courses to meet the general requirements of the college.

Internships

An internship is a practical and professional work experience that allows students to participate in the operations of business, industry, education, government, or not-for-profit organizations. Internships provide students with opportunities to integrate their classroom learning with on-the-job experiences and to test practical applications of their liberal arts education in a variety of settings.

To be eligible for an internship sponsored by an academic department or program, a student generally will have junior or senior standing. Students must request and receive permission from departmental chairpersons or program directors to enroll in internships. The student must also enlist a faculty internship supervisor from the department sponsoring the internship and an on-site internship supervisor from the internship location. Application forms for internships are available in the office of the registrar. The application form shall be completed by the student and approved by the student's academic adviser, faculty internship supervisor, on-site internship supervisor, and the department chairperson prior to registration.

For each semester hour of credit, the intern should invest at least 45 hours of time at the internship location. Academic departments and programs establish other specific criteria and procedures for internships. In addition to the practical on-site experience, internships have an academic component which may include readings, reports, journals, seminars, and/or faculty conferences. A student may enroll for 1–12 credit hours of internship during any one semester. A student may use a maximum of 12 credit hours of internship to meet graduation requirements. All internships have a course number of 400.

Independent Study

Independent study provides an opportunity to undertake a program of supervised reading, research, or creative work not incorporated in existing formal courses. The independent study should result in a formal document. Independent study shall not be used to approximate an existing course or to cover projects more properly described as internships. Junior or senior standing and a minimum GPA of 2.00 are required.

For one semester hour of credit, the independent study student should invest at least 45 clock hours of time in reading, research, or report writing. The independent study involves a contract between the student and the faculty member (contract instructor) who will oversee the study. Written application forms regarding the independent study are available in the office of the registrar. The forms must be completed by the student and approved by the student's faculty adviser, the contract instructor and the department chairperson.

Students may enroll in a maximum of three credit hours per independent study in any one semester. A maximum of six credit hours in independent study may be used toward the graduation requirements. All independent studies have a course number of 500.

Tutorial Study

Tutorial study provides students with a special opportunity to take an existing formal course in the curricula that is not scheduled that semester or summer session. Students desiring a tutorial study must have an appropriate member of the faculty agree to supervise the study on a one-on-one basis.

For one semester hour of credit, the student should invest at least 45 clock hours of time in the tutorial study. The tutorial study essentially involves a contract between the student and the faculty adviser. The typical tutorial study involves readings, research, report writing, faculty conferences, and examinations. All tutorial study courses have the same course number as the existing formal catalog course.

Special Topics Courses

From time to time, departments may offer Special Topics courses using the following course numbers: 290–298, 390–398, 490–498 and 590. Special Topics courses are formal courses that are not listed permanently in the curricula and that are offered infrequently. These courses examine comparatively narrow subjects that may be topical or special interest. Several different topics may be taught in one semester or academic year. A specific course title shall be used in each instance and shall be so noted on the student record.

Study Abroad

Lebanon Valley College has established its own study abroad programs for students majoring in all subjects. All programs insure a cultural immersion experience for students, with several programs, open to language majors and non-language majors, also offering a language-enhancement opportunity. These programs are located in London, Crete, Salamanca, Montpellier, and Cologne. Lebanon Valley also has an exchange affiliation with Anglia Polytechnic University in England, which allows any major to take introductory or advanced courses there while an equal number of British students study at the Annville campus. While students may study anywhere in the world, those who attend one of Lebanon Valley's programs keep all financial aid, including Lebanon Valley scholarships, which insures that students pay the same fees for tuition, room, and board at any of the Lebanon Valley programs. Further information may be obtained at the Office of International Programs, HUM 108, Ext. 6248. See In-Absentia on page 12.

Washington Semester Program

Juniors and seniors in any major field, who have at least a 2.5 grade point average and have had basic courses in American national government, are eligible to participate in this program with approval of their department chairperson. This program is offered in cooperation with The American University in Washington, D.C. Information is available from the chairperson of the Department of Political Science and Economics. See In-Absentia on page 12.



Semester-long symposia, combined with special topic courses, can provide the opportunity to study global cultures.

UNDERGRADUATE DEPARTMENTS AND PROGRAMS

DEPARTMENT OF ART

The Art Department enriches students' understanding of their visual environment using such methods as formal analysis of actual art objects, research of art historical problems, and hands-on exercises with two- and three-dimensional materials. In addition to working in classroom and studio settings, students learn from structured visits to the Suzanne H. Arnold Art Gallery and field trips to regional and national museums. Through the minor in art, the department offers students the opportunity to develop skills that will serve them in their major field: creativity, analysis, research, and communication.

Art Program

Degree Requirements:

No major is offered in art.

Minor: ART 110, 121, 201, 203, 270, one elective course in art (18 credits).

Courses in Art (ART):

110. Introduction to Art. An exploration of meaning in the visual arts. The subject is approached through discussions of perception, the aesthetic experience, and form/content analyses of painting, sculpture, and architecture. 3 credits.

121. Drawing I. An introduction of the fundamentals of drawing. Students will practice seeing and rendering the contour line, the gestural line, mass and volume, texture, negative space and linear relationships. A variety of drawing media will be explored. 3 credits.

122. Drawing II. An introduction to advanced drawing skills. Students will practice and improve the fundamental drawing skills emphasized in Drawing I. Students learn to shift their attention from the isolated object to the whole image, focusing on the creation of three-dimensional space in a fully realized composition. The figure and the landscape will serve as the subjects. Toward the end of the semester color will be introduced. Prerequisite: ART 121 or permission. 3 credits.

201. Art History I. Prehistoric through Medieval Art. A survey of painting, sculpture and architecture beginning with prehistoric sites in Europe and the Near East, followed by studies of ancient Egypt, Mesopotamia, Greece, Rome, Europe in the Middle Ages, and Non-Western art. 3 credits.

203. Art History II. Renaissance to 20th century. A survey of individual masters and their major schools, the course covers the period from the close of the medieval era to the modern day and includes stylistic analyses and historical contexts for painting, sculpture, and architecture of each period. 3 credits.

205. American Art History. An examination of the architecture, painting, sculpture, and the decorative arts from the colonial period to the present day. 3 credits.

270. Ceramics I. Explores a number of clay techniques, including coiling, slab construction, draping, pinching, sculpting, and throwing on a wheel. Students will work with underglazing and glazing, and will fire their work using the low fire, sawdust, and raku methods. In addition to making objects in clay, students will learn from the work of master potters. 3 credits.

401. Art in the Elementary School. Introduction to creative art activity for children in elementary school. Topics covered include philosophical concepts, curriculum, evaluation and studio activity involving a variety of art media, techniques, and processes. 3 credits.

Faculty

Leslie E. Bowen, lecturer in art.

M.F.A., Pennsylvania Academy of the Fine Arts.

Bowen's expertise is in painting and drawing. Due to her love of art history, she particularly enjoys teaching Introduction to Art to non-art students, broadening their experience to include a greater understanding and appreciation of the arts.

Patricia Fay, assistant professor of art. Chairperson.

M.F.A., University of Massachusetts, Amherst.

Fay's passion for the traditional pottery practices of the West Indies helped her to win a Fulbright Fellowship for a year's study in St. Lucia. She is also an accomplished artist who teaches Ceramics, Introduction to Art, and Non-Western Art and Culture.

G. Daniel Massad, artist-in-residence.

M.F.A., University of Kansas.

Massad is a nationally recognized pastel painter of still lifes, whose works are included in such distinguished collections as the Metropolitan Museum of Art and the Philadelphia Museum of Art. Students will have a rare chance to study pastel painting with this acclaimed artist.

Leo Mazow, assistant professor of art. Director of the Suzanne H. Arnold Gallery.

Ph.D., University of North Carolina at Chapel Hill.

Mazow is a specialist in American art history. He teaches art history courses and directs the college gallery.

Ellen Nicholas, adjunct instructor in art.

B.S., Kutztown State University.

Nicholas is committed to integrating art into the general elementary school curriculum as a way of exploring ideas and solving problems in all subjects. She teaches Art in the Elementary School.

Marie Riegler, adjunct instructor in art.

M.F.A., Pennsylvania State University.

Riegler, who teaches Drawing I and Introduction to Art, is an artist and award-winning writer of literature for young people. She is also interested in gardening and science, and is working with the biology department to develop a course on botanical illustration.

R. Gordon Wise, adjunct professor of art.

Ed.D., University of Missouri.

Wise is an artist who has dedicated his career to training art educators. He teaches Art in the Elementary School.

DEPARTMENT OF BIOLOGY

Biology Program

The goal of the Biology Department is to produce graduates who are well-versed in the principles and techniques of biology, have the intellectual training to investigate novel concepts, have the ability to learn independently, interpret and articulate clearly their findings, possess the highest scholarly standards of the discipline, and maintain honest academic conduct.

The Biology Department curriculum (1) employs the underlying principles of biology and requires a background in the supporting disciplines, (2) requires the application of the scientific method in the laboratory or field, (3) integrates informational retrieval, the synthesis of ideas into a coherent whole, and the communication of research findings, and (4) prepares students for graduate, professional, and technical fields.

Degree Requirements:

Degree: Bachelor of Science with a major in biology.

Major: BIO 111, 112, 201, 499; one course each in the general areas of physiology, cellular and subcellular biology, botany, and morphology, and four additional hours of biology (33 credits). CHM 111, 112, 113, 114, 213, 214, 215, 216 (16 credits); PHY 103, 104 or 111, 112; MAS 161 or 111 (61–63 total credits).

Minor: BIO 101, 102, or BIO 111, 112; plus four additional courses in biology (24 total credits).

Secondary Teacher Certification: Students seeking secondary certification in biology must take BIO 312, 360 and 21 credits in education courses including EDU 110 and SED 420, 430 and 440.

Courses in Biology (BIO):

BIO 111 and 112 are prerequisite for all upper-level courses in biology unless otherwise noted.

101. Human Biology. The human organism is utilized as the primary focus to elucidate physiological principles for non-science majors. Topics include nutrition, homeostasis, major organ systems, immunity, and exercise physiology. Laboratory exercises include sensory physiology, respiration, blood pressure, exercise physiology, and ECG. 4 credits.

102. Human Heredity. This course is intended for the non-science major. Although the major emphasis of this course is on the inheritance of traits in humans, topics ranging from basic cell reproduction through gamete production and early stages are also covered. Classical genetics, in both humans and other organisms, including both chromosomal and gene genetics, as well as population genetics, molecular genetics and application of genetics to biotechnology and genetic engineering are discussed. The laboratory is intended to give the student “hands-on” experience in making observations, performing experiments, and working with scientific equipment. Topics to be covered in the laboratory include studying

prepared slides, performing genetic crosses, activating genes in bacteria, isolating DNA and learning about DNA fingerprinting. 4 credits.

103. Environmental Science. Designed for non-science majors, the course serves as an introduction to ecological principles and their applications to understanding the causes and current status of environmental problems. Options for dealing with these problems are evaluated. Possible topics for discussion are overpopulation, food and water resources, ozone depletion, global warming, deforestation, acid rain, biodiversity, erosion, loss of wetlands, energy sources, pollution, eutrophication and waste disposal. Laboratory exercises are designed to illustrate ecological concepts presented in lecture. 4 credits.

111. General Biology I. A rigorous study of basic biological principles, which is designed for science majors. Topics emphasized include cell biology, genetics, taxonomy, histology, and evolution. Laboratory exercises include enzyme kinetics, carbohydrate analysis, isolation and identification of plant pigments, histological techniques, and animal taxonomy. 4 credits.

112. General Biology II. This course, also rigorous and designed for science majors, covers concepts in physiology, embryology, botany and ecology. Laboratory exercises include shark anatomy, invertebrate dissection, animal development, plant development in angiosperms, and stomate response to environmental changes. Prerequisite: BIO 111 or permission. 4 credits.

201. Genetics. A study of the principles, mechanisms and concepts of classical and molecular genetics. The laboratory stresses key concepts of genetics utilizing both classical and molecular approaches. Laboratory exercises include analysis of nucleic acids, genetic crosses, and studies of bacteria, bacteriophages and plasmids. Prerequisites: one year of chemistry or permission. 4 credits.

221. Comparative Vertebrate Anatomy. The comparative anatomy of vertebrates with emphasis on the evolutionary relationships among the various lines of vertebrates. Intensive laboratory work involves dissections and demonstrations of representative vertebrates. 4 credits.

302. Plant Diversity. The development and diversity of fungi, algae and land plants and the relationships between them. Field and laboratory work familiarizes the student with the structure of algae and plants and with the identification of flowering plants in the local flora. Prerequisite: BIO 112 or permission. 4 credits.

304. Developmental Biology. An organismal and molecular approach to the study of animal development using typical invertebrate and vertebrate organisms. The laboratory includes the study of slides as well as experiments on fertilization, regeneration and metamorphosis. 4 credits.

305. Cell and Tissue Biology. A study of cell ultrastructure and the microscopic anatomy

of vertebrate tissues, including the structure and function of membranes and organelles, cell motility and excitability, and vertebrate tissue similarities and specialization in relation to function. Laboratory includes the preparation and staining of sections using selected histochemical and histological procedures as well as a variety of microscopic techniques. 4 credits.

306. Microbiology. A study of the morphology, physiology, and biochemistry of representative microorganisms. The laboratory emphasizes basic bacteriological techniques and procedures. Prerequisite: three semesters of chemistry or permission. 4 credits.

307. Plant Physiology. A study of the functioning of plants, with emphasis on vascular plants. Prerequisite: three semesters of chemistry or permission. 4 credits.

312. Ecology I. An examination of the basic concepts of ecology with extensive laboratory work and field experiences in freshwater, marine, and terrestrial ecosystems. Prerequisites: BIO 112 or permission. 4 credits.

322. Animal Physiology. A study of the principles of vertebrate body function, with emphasis on the mechanisms by which cells and organs perform their functions and the interactions of the various organs in maintaining total body function. Prerequisites: BIO 101 or 112 and one semester of chemistry, or permission. 4 credits.

323. Introduction to Immunology. An introduction to the anatomical, physiological, and biochemical factors underlying the immune response. The course begins with a discussion of non-specific immunity, cellular immunity, and antibody-mediated immune responses. The course then moves into a study of contemporary immunological topics which are discussed with respect to major research papers in each area. Topics include autoimmunity, histocompatibility, immunogenetics, and acquired immune deficiencies. Prerequisites: BIO 111,112 and CHM 111,113 or equivalent or permission. 3 credits.

342. Plants and People. Dependence on certain plants has shaped historical events and cultures, and continues to influence human lives today. This course explores the extent of the impact of plant life on the history, culture, and daily life of human beings. Through lectures, student class presentations, hands-on exercises and field trips, and a one-day field trip to Longwood Gardens, the effect of plants in past and present human lives will be investigated. 3 credits. Disciplinary Perspectives. For all majors, no prerequisites.

360. The Teaching of Biology in Secondary Schools. A course designed for students seeking certification to teach biology in secondary education. Responsibilities include assisting in the preparation of materials and equipment for lab; supervision of lab work; and preparation, administration, and evaluation of quizzes and lab tests. Prerequisite: permission of the instructor. 1 credit.

402. Invertebrate Zoology. A study of most of the major invertebrate phyla, concentrating on movement, metabolism, information and control, reproduction and association between animals. 4 credits.

404. Electron Microscopy. An introduction to the use of techniques for scanning and transmission electron microscopic studies. Through laboratory experience the students will learn the proper use, application, and limitations of the appropriate instruments. Prerequisite: BIO 305 or permission of instructor. 4 credits.

409. Ecology II. An intensive study of ecological processes emphasizing the quantitative aspects of ecology at the population and community levels. Prerequisite: permission of the instructor. 4 credits.

499. Seminar. Each senior student is required to do independent library research on an assigned topic and to make an oral presentation to the biology faculty and students. This course may be repeated. 1 or 2 credits.

Biochemistry and Molecular Biology Program

The Biology Department offers a biochemistry program in conjunction with the Chemistry Department, described on page 47. The major in biochemistry is an interdisciplinary program that provides an opportunity for interested students to engage in a comprehensive study of the chemical basis of biological processes. It is designed to prepare students for advanced study in medical, dental, and other professional schools, for graduate programs in a variety of subjects including biochemistry, clinical chemistry, pharmacology, molecular biology, genetics, microbiology, and physiology, and for research positions in industrial, academic, and government laboratories.

Degree Requirements:

Degree: Bachelor of Science with a major in biochemistry.

Major: BIO 111,112,201; CHM 111, 112, 113, 114, 213, 214, 215, 216; BCH 401, 421, 422, 430, 499; MAS 161; PHY 103, 104 or 111, 112 (51 credits); nine credits from BIO 305, 306, 307, 322, 323, 404 and CHM 305, 306, 307, 308, 311.

Courses in Biochemistry (BCH):

401. Molecular Biology. Gene structure, function and regulation at the molecular level in prokaryotic and eukaryotic organisms. Recombinant DNA techniques (genetic engineering) and gene sequencing are covered in detail. Prerequisite: Three semesters of chemistry and BIO 201 or permission of the instructor. 4 credits.

421,422. Biochemistry I, II. The study of the chemistry of proteins, lipids, and carbohydrates. Topics covered include amino acid chemistry, protein structure, molecular weight determination, ligand binding, enzyme kinetics, enzyme and coenzyme mechanisms, membrane systems, membrane transport, intermediary metabolism, metabolic control, electron transport, and oxidative phosphorylation. Prerequisites: CHM 214, 216 and 312 or permission. 3 credits per semester.

430. Biochemistry Laboratory. Investigations of the properties of proteins, nucleic acids, carbohydrates, and lipids. Prerequisites: CHM 214, 216. 1 credit.

499. Biochemistry Seminar. Readings, discussions, and reports on special topics in biochemistry. 1 credit.

Psychobiology Program

The major in psychobiology is offered jointly by the Departments of Biology and Psychology, described on pages 30 and 112. This interdisciplinary major emphasizes the physiological substrates and consequences of behavior. Consisting of a combination of psychology and biology course work, the program prepares students for graduate study in medicine, veterinary medicine, graduate programs in psychology, animal behavior, physiological psychology, psychopharmacology, behavior genetics, and neuroscience, as well as research positions in industry, universities, hospitals, and government laboratories.

Degree Requirements:

Degree: Bachelor of Science with a major in psychobiology.

Major: BIO 111, 112, 201, 322 (16 credits); PSY 110, 335, 358 plus two courses from the following: PSY 210, 216, 355, 431 (16 credits); PSY 491 or BIO 491, BIO 499 or PBI 499, BIO 500 or PSY 500 (8 credits); CHM 111, 112, 113, 114 (8 credits); MAS 161 and CSC 125 or 170 (6 credits); plus 8 additional credits in the sciences in consultation with adviser. Recommended CHM 213, 214, 215, 216, PHY 103, 104 or 111, 112. 62 total credits.

Courses in Psychobiology (PBI):

358. Physiological Psychology. A study of the biological mechanisms underlying behavior processes. The course focuses on the physiology of reflexes, sensation and perception, learning and memory, sleep, ingestive behaviors and motivation and emotion. The laboratory portion of the course includes sheep brain dissection. Prerequisite: PSY 110, 210 or permission; completion of a biology course is recommended. 3 credits. {Cross-listed as Psychology 358.}

499. Psychobiology Seminar. Readings, discussions, and reports on selected topics in psychobiology. Prerequisite: permission. This course may be repeated. 1 credit.

Faculty

Dale J. Erskine, professor of biology.

Ph.D., University of Oklahoma.

He teaches animal physiology, introduction to immunology, human biology, psychobiology, and participates in general biology. He believes in introducing his students to a wide range of laboratory experiences including modern instrumentation and computer-assisted data collection. His research interests are in temperature regulation and thermal tolerance, heat of women, and economic/social history of the Federal period.

Stacy A. Hazen, assistant professor of biology.

Ph.D., The Pennsylvania State University.

She teaches general biology, coordinates the general biology laboratories, and supervises the senior seminar. Her research interests include the functioning of carbonic anhydrase isozymes; and the role of PDH kinase in sepsis.

Sidney Pollack, professor of biology.

Ph.D., University of Pennsylvania.

He teaches courses in genetics, microbiology, human biology, and general biology. He is the academic adviser for students preparing for the allied health professions. His research interests include paramecium genetics.

Susan Verhoek, professor of biology.

Ph.D., Cornell University.

She teaches plant form and function at the general biology level, and form, interrelationships and systematics of non-vascular and vascular plants at the advanced level. Her research is on the pollination biology and systematics of members of the Agave family. A past president of the Society for Economic Botany, she has a long-standing interest in the interactions of plants and humans, and, as author of a field identification book, a continuing interest in plants that flower in the spring.

Stephen E. Williams, professor of biology.

Ph.D., Washington University, St. Louis.

He teaches molecular biology, plant physiology and the biochemical portions of general biology. He is a plant and cell physiologist who, working together with Lebanon Valley College students and scientists at other institutions, has made most of the major contributions to the understanding of the physiology of carnivorous plants during the past 20 years, including the discovery of the mechanism of Venus flytrap closure. He has over six years of experience automating laboratory instruments with microcomputers. He is regularly a faculty member at Cornell University during the summer session.

Paul L. Wolf, professor of biology. Chairperson.

Ph.D., University of Delaware.

He teaches courses in general biology, comparative vertebrate anatomy, ecology and environmental science. His research interests focus on the ecology of wetlands with particular emphasis on saltmarshes of Eastern United States and methane production in freshwater marshes. He also holds the position of adjunct professor of marine biology in the Graduate College of Marine Studies, University of Delaware.

Allan F. Wolfe, professor of biology.

Ph.D., University of Vermont.

He teaches comparative histology, developmental biology, invertebrate zoology, electron microscopy, general biology, and parasitology, and directs independent study in cell biology using electron microscopic and histological techniques. His current research utilizes the brine shrimp, *Artemia*, to study the cell and tissue levels of organization of the digestive, reproductive, and neurosensory systems.

Anna F. Tilberg, adjunct instructor in biology.

B.A., University of Pennsylvania.

She is on the staff of the Milton Hershey Medical Center and teaches human biology.

DEPARTMENT OF BUSINESS ADMINISTRATION

The Department of Business Administration offers programs leading to the bachelor of science degree in accounting, business, health care management, hotel management and international business. The department also offers business concentrations in human resource management, management, and marketing and minors in accounting, business and hotel management. The programs are designed to provide students with a sound, integrated knowledge of accounting, business, economics and communications as well as related courses from supporting disciplines. All programs are enhanced by the liberal arts core required of all Lebanon Valley College students, and by the extensive application of computers in relevant courses. This interdisciplinary knowledge base is essential for assuming leadership positions in the changing business environment.

Business students complete a common body of knowledge in close conformity with the national standards for the study of business administration as recommended by the American Assembly of Collegiate Schools of Business. A 36-hour core is required of all department majors to ensure a strong, comprehensive background in business fundamentals. As a result, graduates are prepared for business careers and graduate schools.

Accounting Program

The program in accounting offers the bachelor of science degree in accounting. Majors receive an excellent foundation for seeking professional certification as a C.P.A. or C.M.A. The accounting curriculum prepares the student for careers in public accounting, governmental, industry, or finance.

The curriculum includes an array of introductory, intermediate, and advanced accounting topics integrated with courses in business and other supporting fields.

The 24 credit hours for the minor in accounting supply the minimum accounting background to sit for the C.P.A. exam.

Degree Requirements:

Degree: Bachelor of Science with a major in accounting.

Major: Business core which includes ACT 151, 152; ECN 101, 102; ENG 210; MAS 170; BUS 230, 340, 350, 361, 371, 485; ACT 251, 252, 353; nine credit hours in accounting electives; BUS 322 (57 credits).

Minor: ACT 151, 152, 251, 252, 353, six credit hours of accounting electives (21 credits).

Courses in Accounting (ACT):

151. Principles of Accounting I. Fundamental principles and concepts of accounting encompassing business transactions, the accounting cycle, and classified financial statements including discussion of various topics relating to balance sheet and income statement items. For accounting majors. Credit not awarded for both ACT 151 and ACT 161. 3 credits.

152. Principles of Accounting II. A continuation of Principles of Accounting I focusing upon accounting concepts, partnerships, and business transactions related to corporate liabilities, equity, and investments. Includes basic financial analysis. For accounting majors. Prerequisite: ACT 151 or ACT 161 with minimum grade of "C–" or better. 3 credits.

161. Financial Accounting. Basic concepts of accounting including accounting for business transactions, preparation and use of financial statements, and measurement of owners' equity. An introductory course for non-accounting majors. Credit not awarded for both ACT 151 and ACT 161. 3 credits.

162. Managerial Accounting. Cost-volume-profit relationships, cost analysis, business segment contribution, profit planning and budgeting as a basis for managerial decision making. Prerequisite: ACT 151 or 161 with a minimum grade of "C–" or better. 3 credits.

251. Intermediate Accounting I. Study of the theory and development of generally accepted accounting principles as they relate to financial reporting; the application of these principles to the preparation of financial statements; special emphasis on revenue recognition as well as valuation, classification and disclosure of current assets 3 credits.

252. Intermediate Accounting II. An analysis of financial statements, effects of errors and changes on statements, preparation of funds flow statement, and valuation problems, in accounting for leases and pensions and stockholder's equity. Prerequisite: ACT 251 with a minimum grade of "C–" or better. 3 credits.

253. Intermediate Accounting III. Analysis of more specialized financial accounting topics including pension plans, post-retirement benefits, leases, income taxes, accounting charges, cash flow statement, financial statement analysis, and changing prices. Computer component. Strongly recommended for accounting majors. Highly recommended for accounting majors. Prerequisite: ACT 252. 3 credits.

351. Advanced Accounting. Study of theory and standards with application to income presentation, interim reporting, and per-share disclosures. Emphasis on business combinations and consolidated financial presentations. Prerequisite: ACT 252. 3 credits.

352. Governmental and Non-Profit Accounting. Basic concepts of fund and budgetary accounting used for financial activities of governmental units and other not-for-profit organizations. Prerequisite: ACT 152. 3 credits.

353. Cost Accounting. Analysis and use of techniques for cost management and control; the accumulation and recording of the costs including job-order, process and standard cost systems, the joint and by-product costing; contemporary topics such as activity based costing and just-in-time manufacturing. Prerequisite: ACT 152. 3 credits.

400. Internship. Field accounting or auditing experience in a business, government or other organization. Alternatively, participation in the Practicum in Accounting, a campus program

performing accounting services with participating area businesses. Ordinarily open to junior and senior accounting majors. Prerequisite: GPA of 2.75 or higher in major and permission of department chair. 1 - 15 credits.

451. Individual Income Tax. Analysis of the federal income tax laws as applied to individuals; case problems, preparation of returns. Prerequisite: ACT 152. 3 credits.

452. Corporate Income Tax. Analysis of the federal income tax laws as applied to corporations, partnerships and fiduciaries; case preparation of returns. Prerequisite: ACT 451. 3 credits.

455. Auditing. A study of the process of evaluation of internal controls and interpretation of financial information to permit an auditor to express a professional opinion on financial reports. Prerequisite: ACT 252. 3 credits.

500. Independent Study. A course to allow the student to investigate an accounting subject not incorporated into the curriculum. Ordinarily for juniors and seniors only. By permission of the department chair. 1 - 6 credits.

Business Program

This popular program offers the bachelor of science degree in business. This major is designed to prepare the student for a variety of entry-level and middle-management positions in industry, government, and service organizations.

The business curriculum conforms closely to the national common body of knowledge recommended by the American Assembly of Collegiate Schools of Business and provides a solid background in the fundamentals of business. Majors select a concentration from three possible areas: human resource management, management, or marketing to specialize beyond the departmental core.

Degree Requirements:

Degree: Bachelor of Science with a major in business.

Major: Business core which includes ECN 101, 102; ACT 161, 162; MAS 170; ENG 210; BUS 230, 340, 350, 361, 371, 485; and one of the following concentrations (57 credits):

Human Resource Management - BUS 130, 322, 420, 425, 480; HIS 326; and one of the following: SWK 242; PSY 346, PSY 431.

Management - BUS 130, 322, 380, 460, 480, 483; HIS 326.

Marketing - BUS 130, 322, 341, 364, 374, 484; HIS 326.

Minor: ACT 151 or 161; ECN 101; BUS 130, 230, 340, 371; one department elective (21 credits).

Courses in Business (BUS):

130. Principles of Business. An examination of the principles of business administration. Emphasis is on understanding the nature and composition of business organizations and the expectations of those preparing for entry into this field. 3 credits.

215. Health Care Finance. An examination of the financial issues of health and medical care to determine how to provide the best health care to the most people in a cost-effective manner. Examination of the principal elements of health care, including the physician, the hospital, and the pharmaceutical industry, as well as the influence of government and the insurance industry. Prerequisites: ECN 101, 102. 3 credits.

230. Management and Organizations. A study of management principles, organizational theory, and administrative techniques as applied to the effective and efficient operation of both profit and nonprofit organizations. Emphasizes the organization's structure, leadership, interpersonal relationships, and managerial functions. 3 credits.

322. Quantitative Methods. An introduction to some of the quantitative methods used in modern management science and economics. Topics include probability concepts, forecasting, decision theory, linear programming, queuing theory, network models, and Markov analysis. Prerequisites: MAS 170 with a minimum grade of "C-" or better. 3 credits.

340. Principles of Marketing. An overview of marketing from the management perspective. Topics include marketing strategies; marketing research; consumer behavior; selecting target markets; developing, pricing, distributing, and promoting products and services and non-profit marketing. Prerequisite: junior standing or permission. 3 credits.

341. Consumer & Business Buying Behavior. Analysis of factors affecting purchase decisions in the marketplace; application of behavioral and social science concepts to the study of consumer behavior. Emphasis on use of knowledge of consumer behavior for marketing decisions. Prerequisite: BUS 230 and 340, or permission. 3 credits.

350. Organizational Behavior. A detailed study of theories and models of organizational behavior and development, with emphasis on the practical application of these models in the workplace to improve individual, group, and organizational performance. Prerequisite: junior standing and BUS 230, or permission. 3 credits.

361. Managerial Finance. A study of financial management covering analysis of asset, liability and capital relationships and operations; management of current assets and working capital; capital planning and budgeting; capital structure and dividend policy; short and intermediate term financing; internal and external long term financing; and other financial topics. Prerequisite: ACT 152 or 162; ECN 101, 102. 3 credits.

362. Investments. An analysis of investment and its relation to other economic, legal, and social institutions. The course includes discussion of investment principles, machinery, policy, management investment types, and the development of portfolios for individuals and

institutions. Prerequisite: BUS 361. 3 credits.

364. Advertising. The role advertising plays in American life and its effect upon consumer behavior. Analysis of media strategies, functions of advertising agencies, creation of successful advertisements, and the legal and ethical restraints on advertising. Prerequisite: BUS 340. 3 credits.

371. Business Law I. Elementary principles of law relating to the field of business. The course covers contracts, government regulation of business, consumer protection, bankruptcy, personal property, real estate, bailments, insurance and estates. 3 credits.

372. Business Law II. Elementary principles of law relating to business. Includes agency, employment, commercial paper, security devices, insurance, partnerships, corporation, estates, bankruptcy. 3 credits.

374. Personal Selling and Sales Management. The study of personal selling as a communication process, and the management of the personal selling force. Emphasis is placed upon the development, implementation, and evaluation of the sales presentation; and upon the role of the sales manager in staffing, compensating, motivating, controlling, and evaluating the sales force. Effective oral and written communication is stressed. Prerequisite: BUS 340 or permission. 3 credits.

376. International Business Management. Studies management techniques and procedures in international and multinational organizations. Prerequisite: BUS 230, 340. 3 credits.

380. Small Business Management. A study of small business, including organization, staffing, production, marketing, and profit planning. Cases are used extensively in presenting the course material. Prerequisite: ACT 152 or 162; BUS 230, or permission. 3 credits.

400. Internship. Field experience in a business, government, or organization Ordinarily for juniors and seniors, only. Prerequisite: GPA of 2.75 in major and permission of department chair. 1 - 15 credits.

420. Human Resource Management. This course examines the problems in effectively recruiting, selecting, training, developing, compensating, and disciplining human resources. It includes discussions on both equal employment opportunity and labor-management relations. Prerequisite: BUS 230 or permission. 3 credits.

425. Labor Management Relations. Emphasizes origin, growth, and development of labor organizations and their impact on management practices. Topics include legislation affecting industrial relations; collective bargaining; contract administration; industrial jurisprudence; and arbitration. Prerequisite: BUS 230, or permission. 3 credits.

460. Management Information Systems. Examines data sources and the role of information in management planning, operations, and control in various types of business environments.

Treats information as a key organization resource parallel to people, money, materials, and technology. Prerequisite: ACT 152 or 162; BUS 230, or permission. 3 credits.

480. Contemporary Issues in Management. This course will focus on a study of contemporary issues that managers will be called upon to deal with in the management of businesses and organizations. Topics studied include drug testing in the workplace, the effects of AIDS on businesses, dual career couples, sexual harassment, stress, equal employment opportunity, absenteeism, workforce diversity, gays and lesbians in the workforce, eldercare, smoking policies in the workplace, downsizing, the “Mommy Track” and “Glass Ceiling” for women in management, as well as other contemporary issues in management. Students will read current materials on each area and discuss the implications of each on American businesses and organizations. 3 credits.

483. Operations Management. An overview of the production/operations management function as applied to both manufacturing and service organizations. It provides a background of the concepts and processes used in the production/service operations area. Integrated throughout are considerations of the information systems, the people involved, the quantitative techniques employed, and the international implications. Prerequisite: BUS 230, 322, or permission. 3 credits.

484. Marketing Research. This course is an introduction to the methodology of marketing research. Specific topics covered include problem formulation, research design, sample design, data collection, analysis and interpretation of data, and presentation of research findings. Prerequisite: MAS 170; BUS 230, 340. 3 credits.

485. Strategic Management. A capstone course to study administrative processes under conditions of uncertainty, integrating prior studies in management, accounting, and economics. Uses case method and computer simulation. Prerequisites: BUS 230, 340, 361 and senior standing, or permission. 3 credits.

487. Health Care Management. A capstone course to study the administrative processes of America’s health care industry including institutional infra-structure, governance systems, financial systems, personnel systems, quality controls, nursing and clinical services, and marketing. The course integrates prior study in health care, management, accounting, and economics. Students will develop problem solving skills and an appropriate management style. Prerequisite: senior standing or permission. 3 credits.

500. Independent Study. A course to allow the student to investigate a management subject not incorporated into the curriculum. Ordinarily for juniors and seniors, only. By permission of the department chair. 1 - 6 credits.

Health Care Management Program

The major in health care management is designed for people in health care fields who possess an associate degree or diploma and professional certification. These qualifications are required for admission to the program. The program combines studies in the liberal arts and management, plus business practices common to the health care industry.

Degree Requirements:

Degree: Bachelor of Science with a major in health care management.

Major: Health Care Management/Business core: ACT 161, 162; BUS 215, 230, 487; ECN 101, 102; ENG 111, 210; PHL 360; SOC 324; 12-15 credits in sociology, psychology, or other disciplines approved by the director of continuing education (at least six credits in courses at the 200 level or higher); and any four of the following courses (12 credits): BUS 322, 340, 350, 361, 371, 372, 384, 420, 425, 480, 484; MAS 170(60–63 total).

Admission to this degree program is open only to adults who have completed successfully an accredited diploma or associate degree program also with certification by a state governmental agency or a national professional accrediting organization in the following fields: Clinical Medical Assistant, Cytotechnologist, Dental Hygienist, Emergency Medical Technician, Medical Laboratory Technician, Nuclear Medicine Technologist, Occupational Therapy Assistant, Physical Therapy Assistant, Radiologic Technologist, Registered Nurse, Respiratory Therapist.

Hotel Management Program

The hotel management program offers the bachelor of science degree in hotel management. The major is designed to prepare students for entry and middle management positions in the rapidly expanding hotel industry. Graduates of this program find positions in the hotel industry as banquet managers, front desk managers, food and beverage managers, personnel managers, and hotel financial analysts.

The program also offers a minor in hotel management that may be taken in conjunction with many other majors.

Degree Requirements:

Degree: Bachelor of Science with a major in hotel management.

Major: Business core which includes ACT 161, 162; BUS 230, 340, 350, 361, 371, 485; ECN 101, 102; ENG 210; MAS 170; HTM 111, 112, 211, 222, 311, 322; and one of the following; HTM 231, 331, 431 (57 credits).

Minor: HTM 111, 112, 211, 222, 231, 311; ACT 161 (21 credits).

Courses in Hotel Management (HTM):

111. Introduction to the Hospitality Industry. Examines the history, development and operation of the hospitality industry. Emphasis is on current organization problems, opportunities and trends. An overview of how the hospitality industry functions in the world economy. Management orientation stressed. 3 credits.

112. Front Office Management. An analysis of the integrated functions of the front office and housekeeping departments. Topics include work and information flow within and between departments, demand forecasting, pricing strategies, reservations and control, front

desk responsibilities, guest services, emergency procedures, night auditing, and a general introduction to the art of innkeeping. Materials, equipment and techniques involved in the housekeeping function will also be analyzed. Prerequisite: HTM 111. 3 credits.

211. Hotel Law. Fundamentals of hotel law including innkeeper laws and dramshop laws. The case study method develops an awareness and understanding of the legal problems confronting hotel managers. 3 credits.

221. The Psychology and Sociology of Leisure. An analysis of the fundamental psychological and sociological concepts and theories related to the motivation for travel. Review of consumer behavior in the hotel industry. Evaluating customer needs and services. Prerequisite: HTM 111 or permission. 3 credits.

222. Food and Beverage Management I. Introduction to the food and beverage functions with emphasis on menu planning and purchasing. Includes fundamentals and language, systems, equipment, operational responsibilities, management organizational patterns, nutrition, storage, and sanitation. Prerequisite: HTM 111. 3 credits.

231. Supervised Field Experience: Front Office Management. Emphasizes selected aspects of front office management. Accompanied by readings, reports, journals, and faculty conferences. One hundred thirty-five (135) hours of field work in the hotel industry. Prerequisite: HTM 112 and permission. 3 credits.

311. Advanced Hotel Management. An analysis of the following aspects of hotel organizations: health, safety and security; building and grounds; equipment purchase, repair and maintenance; facilities design; renovation and maintenance; internal controls; and energy management. Prerequisite: HTM 112. 3 credits.

322. Food and Beverage Management II. Analysis of the food and beverage functions with emphasis on production and services. Prerequisite: HTM 112. 3 credits.

331. Supervised Field Experience: Marketing. Emphasizes selected aspects of marketing techniques and research. Accompanied by readings, reports, journals, and faculty conferences. One hundred thirty-five (135) hours of field work in the hotel industry. Prerequisite: HTM 112, MGT 340 and permission. 3 credits.

431. Supervised Field Experience: Accounting and Finance. Emphasizes selected aspects of accounting and financial management concepts and techniques. Accompanied by readings, reports, journals, and faculty conferences. One hundred thirty-five (135) hours of field work in the hotel industry. 3 credits.

International Business Program

The program in international business provides an opportunity to integrate the study of business with the knowledge of a foreign language, culture, and political science. It is designed to equip students with the background and skills necessary to work with foreign

corporations within the United States and with American corporations abroad.

While acquiring a strong liberal arts background, students who elect this major will receive training in accounting, management, economics and political science. They also will become familiar with a foreign culture and will acquire proficiency in French, German or Spanish. International business majors are required to complete an international internship or a study abroad program. Internships must be approved by the department chairperson. Prerequisite: junior/senior standing.

Degree Requirements:

Degree: Bachelor of Science with a major in international business.

Major: Business core which includes ACT 161, 162; ECN 101, 102; ENG 210; MAS 170; BUS 230, 340, 350, 361, 371, 485; and two of the following: ECN 322, PSC 210, 130, 312; and a minor in a foreign language.

Faculty

Donald C. Boone, associate professor of hotel management.

M.B.A., Michigan State University.

Boone has 18 years of hotel industry experience and has taught several years in hotel management programs. He serves as coordinator of the hotel management program and teaches courses in hotel management, financial and managerial accounting, and principles of management. Boone has received the designation of Certified Hotel Administrator from the Educational Institute of the AH&MA and he is a non-practicing C.P.A.

Sharon F. Clark, professor of business administration.

J.D., University of Richmond.

Clark has experience in private law practice and several years as a supervisory tax attorney with the Internal Revenue Service. She serves as a management consultant to various state-wide organizations. Clark teaches courses in business law, labor relations, human resource management and management. She is a faculty member for the M.B.A. program.

Cordelia W. Jennings, lecturer in accounting.

M.B.A., Rutgers University.

Jennings is a C.P.A. with extensive experience as a tax professional with both regional and "Big Six" accounting firms. She also has experience as a financial and accounting analyst for a Fortune 500 company. She teaches courses in accounting and business.

Robert W. Leonard, associate professor of business administration. Chairperson.

M.B.A., Ohio State University.

Leonard has been a management consultant for 12 years, working with over 100 organizations. He has received numerous state and federal training grants for his work with nonprofit organizations. He serves as director of the college's Supervisory Management Institute. He teaches courses in organizational behavior, management, managerial finance and management information systems and is a faculty member for the M.B.A. program. He has done Ph.D. study at Ohio State University.

Leon E. Markowicz, professor of business administration.

Ph.D., University of Pennsylvania.

Markowicz is a communications consultant and a writer for *The Daily News* of Lebanon. His research includes investigating the relationships among communications, the effectiveness of an organization, and leadership. He teaches courses in communications.

Barney T. Raffield III, professor of business administration.

Ph.D., Union Graduate School.

Raffield is working on a third edition of his textbook on marketing management and teaches courses in marketing, strategic management, advertising, consumer behavior and international business management. He is a faculty member for the M.B.A. program and consults with area businesses.

Gail Sanderson, associate professor of accounting.

M.B.A., Boston University.

A C.P.A., Sanderson has professional experience in accounting, income tax, computer systems analysis and design. She teaches courses in financial and managerial accounting.

Barbara S. Vlaisavljevic, associate professor of accounting.

J.D., Widener University.

Vlaisavljevic has worked in the public sector as a C.P.A. for nine years. She teaches courses in auditing, governmental and non-profit accounting, and managerial accounting.

James F. Bednarski, adjunct instructor in business administration.

B.A., Franklin & Marshall College.

Bednarski is President of The Patriot Group, a management consulting firm concentrating in strategic planning, information systems, process re-engineering and total quality management. He teaches courses in management information systems.

Nancy L. Eastwood, adjunct instructor in business administration.

M.B.A., University of Pittsburgh.

Eastwood has experience as a financial consultant for small businesses and a credit analyst in the banking industry. She teaches managerial finance and is an M.B.A. faculty member .

Catherine M. Fitzgibbons, adjunct instructor in business administration.

J.D., Northwestern University School of Law.

Fitzgibbons is a partner in the law firm of Fitzgibbons & Fitzgibbons whose practice specializes in estate planning, small business and real estate. She teaches business law and is an M.B.A. faculty member.

Donald R. Gross, adjunct instructor in business administration.

M.B.A., Boston University.

Gross is a Certified Financial Adviser and a self-employed financial and portfolio manager. He teaches courses in managerial finance.

Steven Pecsok, adjunct assistant professor of business administration.

Ph.D., Virginia Polytechnic Institute and State University.

Pecsok designs software for decision making. He teaches courses in quantitative methods and economics.

Jeff Tsai, adjunct assistant professor of business administration.

Ph.D., Florida State University.

Tsai works for the Pennsylvania Bureau of Information Systems and teaches courses in management information systems, operations management and economics.



The business administration programs are designed to provide students with a sound, integrated knowledge of accounting, business, economics and communications.

DEPARTMENT OF CHEMISTRY

Chemistry Program

Chemistry is the “central science” that provides the fundamental understanding needed for protecting our environment, maximizing the yield from limited natural resources, improving our health, and creating new materials for tomorrow’s products. Indeed, chemistry is essential to understanding life itself.

Career opportunities in chemistry are numerous and diverse. Many students enter industrial or governmental laboratories where they find positions in environmental analysis, quality control, or research and development. Possibilities outside of the laboratory include teaching, sales, marketing, technical writing, business, and law. Many chemistry students continue their education in graduate school in chemistry or biochemistry, or in professional schools in the areas of medicine, dentistry, or veterinary medicine.

The Department of Chemistry is located on the upper two floors of the Garber Science Center. Major scientific equipment available to students includes a nuclear magnetic resonance spectrometer, a liquid scintillation counter, a fourier transform infrared spectrometer, a high performance liquid chromatographic system, a diode–array UV–visible and Roman spectrophotometer, a gas chromatograph–mass spectrometer, and an atomic absorption spectrophotometer. Computers available to students in the department include 10 Power Macintosh computers in the Molecular Modeling Laboratory.

The department encourages students to discover the excitement and challenge of laboratory research. Research programs are conducted during both the academic year and the summer. Students are paid for summer research either from college funds or from grants that professors receive to support their projects.

Two degrees are available to those interested in chemistry, and one for those interested in biochemistry. The Bachelor of Science in Chemistry is the more demanding of the two degrees in chemistry, and is recognized by the American Chemical Society. This degree has a required research component and is recommended for students who wish to become practicing chemists or enroll in graduate school. Other students opt for the standard Bachelor of Science, majoring in chemistry.

The major in biochemistry is offered jointly with the Biology Department. For the major program and course descriptions in biochemistry, see page 33.

Degree Requirements:

Degrees: Bachelor of Science in Chemistry, Bachelor of Science with a major in chemistry.

Majors: (B.S. in Chemistry) CHM 111, 112, 113, 114, 213, 214, 215, 216, 222, 305, 306, 307, 308, 311, 312, 321, 322, 411; six credits from CHM 491–498 or 590 or BCH 421, 422; four credits of CHM 510; MAS 161, 162; PHY 111, 112 (63–64 credits).

(B.S., major in chemistry) CHM 111, 112, 113, 114, 213, 214, 215, 216, 222, 305, 306, 307, 308, 311, 312, 321, 322; six credits from CHM 421, 491-498; MAS 161, 162; PHY 111, 112; (50–51 credits).

Minor: CHM 111, 112, 113, 114; 12 credits from CHM 213, 214, 222, 305, 306, 311, 312, 411 or BCH 421, 422; three credits from CHM 215, 216, 307, 308, 321, 322 or BCH 430.

Secondary Teacher Certification: Students seeking secondary certification in chemistry must take BIO 111, 112; BCH 421; CHM 360 and 21 credits education courses including EDU 110 and SED 420, 430 and 440.

Courses in Chemistry (CHM):

100. Introduction to Chemistry. An introduction to the principles of chemistry including mathematical tools, atomic structure, stoichiometry, elementary concepts of equilibrium, bonding, and organic chemistry. Intended for non-science majors. Laboratory experience included. 4 credits. Students who have received credit for CHM 111 may not take CHM 100.

109. Chemical Skills. A step-by-step approach to solving chemical problems. Topics include the application of mathematical tools in introductory chemistry and techniques for finding the proper approach to solve problems. The course is designed to be taken concurrently with CHM 111. 1 credit.

111, 112. Principles of Chemistry I, II. An introduction to chemistry for the science major. First semester topics include atomic and molecular structure, chemical reactions, calculations involving chemical concentrations, gas laws, and bonding. Second semester covers kinetics, acids and bases, equilibrium, oxidation-reduction chemistry, thermodynamics, electrochemistry, and nuclear chemistry. Prerequisite: one year of high school chemistry or permission. 3 credits per semester.

113, 114. Introductory Laboratory I, II. Laboratory courses to accompany 111 and 112. Experiments cover stoichiometry, gas laws, quantitative analysis, equilibrium, electrochemistry, chemical synthesis, and the use of computers for collecting data. Students are introduced to instrumentation including infrared, UV-visible, NMR and atomic absorption spectrometers. Prerequisite or corequisite: CHM 111 for CHM 113 and CHM 112 for CHM 114. 1 credit per semester.

213, 214. Organic Chemistry I, II. An introduction to the principles of organic chemistry. The focus of the course is on the structure of organic molecules and how the structure of various functional groups affects their reactivity. The concepts of reactivity, structure and mechanism are applied to organic synthesis. Prerequisite: CHM 112. 3 credits per semester.

215, 216. Organic Laboratory I, II. An introduction to the practice of classical organic chemistry and modern instrumental organic chemistry. The techniques of organic synthesis are taught along with instrumental methods including infrared, nuclear magnetic resonance, and mass spectrometry. Prerequisite or corequisite: CHM 114 and CHM 213 for CHM 215 and CHM 214 for CHM 216. 1 credit per semester.

222. Introductory Inorganic Chemistry. The application of elementary principles of chemistry to provide a basis for understanding the physical and chemical properties of the elements. Topics include periodicity, acidity or basicity of metal cations and oxoanions, precipitation reactions, oxidation-reduction chemistry and the structures of solids. Prerequisite: CHM 112. 3 credits.

305. Analytical Chemistry. Gravimetric, volumetric, and electro-chemical methods of chemical analysis covered. Includes statistical methods of data treatment and rigorous considerations of complex chemical equilibria. Prerequisites: CHM 112 and MAS 161. 3 credits.

306. Instrumental Analysis. Basic types of chemical instrumentation and their applications in analytical chemistry are examined. These include gas and liquid chromatography; infrared, UV-VIS, fluorescence, atomic absorption, and plasma emission spectrophotometry; nuclear magnetic resonance and mass spectrometry; and radiochemical methods. Prerequisites: CHM 112 and MAS 161. 3 credits.

307. Quantitative Analysis Laboratory. Techniques of gravimetric, volumetric, and electro-chemical analysis are applied to the analysis of unknowns. Prerequisite or corequisite: CHM 305. 1 credit.

308. Instrumental Analysis Laboratory. Chemical instrumentation is utilized in analytical method development and analysis. Prerequisite or corequisite: CHM 306. 1 credit.

311. Physical Chemistry I. The study of thermodynamic laws and functions, including phase and reaction equilibria. Systems under study include ideal and real gases, ideal and non-ideal solutions, and multi-component phase transitions. Prerequisites: CHM 112, MAS 161, and PHY 104 or 112. 3 credits.

312. Physical Chemistry II. The study of chemical systems from a molecular perspective. Basic concepts of quantum chemistry and statistical theory applied to atomic and molecular structure. Also included are electrochemistry, kinetics, and transport processes. Prerequisite: CHM 311. 3 credits.

321, 322. Physical Laboratory I,II. Application of chemical instrumentation to a study of the principles of physical chemistry. Experimental work involves calorimetry, refractometry, conductivity, viscometry, and atomic absorption, FTIR, UV-VIS, and NMR spectroscopy applied to the study of phase and reaction equilibria, kinetics, and atomic and molecular structure. Prerequisite or corequisite: CHM 311 for CHM 321 and CHM 312 for CHM 322. 1 credit per semester.

360. The Teaching of Chemistry in Secondary Schools. A course designed for students seeking certification to teach chemistry in secondary education. Topics include evaluation of laboratory experiments, demonstrations, textbooks, and computer software. Prerequisites: CHM 112, 114. 3 credits.

411. Advanced Inorganic Chemistry. A study of bonding theories, molecular structure, spectroscopy, and reaction mechanisms with special emphasis on transition metal complexes. Prerequisite: CHM 312. 3 credits.

421. Chemometrics. The application of multivariate statistics to experimental design and data analysis. Topics include experimental design, pattern recognition, calibration, optimization, signal processing and peak resolution. Some familiarity with computers and chemical instrumentation is recommended. Prerequisite: CHM 112. 3 credits

510. Chemical Research. Chemical research conducted under the supervision of a faculty member. This course introduces the students to the methods and analysis involved in research. A major written report and an oral presentation are required. Prerequisites or corequisites: CHM 305 and 311 and senior standing. 1 to 4 credits per semester.

810. Computers in Chemistry. A hands-on study of the application of Macintosh computers to problems in the high school chemistry curriculum. Topics include word-processing, graphics, spreadsheets, applications of computer interfacing, molecular modeling, and the Internet. 3 credits.

Course in Science (SCI):

100. Introduction to Science. The study of scientific principles and experiments applicable to a person's everyday experiences. Student projects are selected from the areas of biology, chemistry, and physics. The course is open to all students, and is appropriate for those intending to teach elementary school. Laboratory experience included. 4 credits.

Faculty

Richard D. Cornelius, professor of chemistry. Chairperson.

Ph.D., University of Iowa; postdoctoral research, University of Wisconsin.

Inorganic chemistry. Cornelius works at the border of inorganic chemistry and biochemistry. He has earned a national reputation for his work with computers in chemical education and is currently exploring the educational possibilities of the World Wide Web. He also is revising the general chemistry course for science majors to include a variety of everyday experiences as the organizing force for the course.

Donald B. Dahlberg, professor of chemistry.

Ph.D., Cornell University; postdoctoral work, University of Toronto.

Physical chemistry and chemometrics. Dahlberg does research in the application of multivariate statistics to chemical problems. He is also an industrial consultant in this area. He is presently studying the use of chemometrics and Fourier transform infrared spectroscopy in the analysis of edible oils. Food manufacturers must perform dozens of expensive and time-consuming analyses to guarantee the quality of their products. Through the use of modern chemical instrumentation and sophisticated mathematical techniques, it may be possible to replace these tests with just one.

Owen A. Moe Jr., professor of chemistry.

Ph.D., Purdue University; postdoctoral study, Cornell University.

Biochemistry. Moe directs his research toward an understanding of enzyme active sites. He uses a technique called affinity labeling to covalently label amino acid residues at enzyme active sites. His research group carries out kinetic analyses of modified enzymes, identifies labeled amino acids by chromatographic and protein sequencing methods, and studies active site topography using computer-based molecular modeling.

Philip J. Oles, visiting assistant professor of chemistry.

Ph.D., University of Massachusetts.

Analytical chemistry. Oles has extensive experience in chemical industry in the area of analyzing foods for various nutrients.

Carl T. Wigal, assistant professor of chemistry.

Ph.D., Miami University, Ohio.

Organic chemistry. Wigal's research is aimed at developing new strategies for synthesizing natural products. Of particular interest to Wigal are the synthetic and mechanistic aspects of addition reactions to 1,4-quinones. He also is actively developing microscale experiments for organic chemistry.

H. Anthony Neidig, professor and chairperson *emeritus*.

Ph.D., University of Delaware.

Recipient of the Chemical Manufacturers' Association College Chemistry Teacher Award in 1970 and the E. Emmet Reid Award for excellence in teaching in a small college in 1978. Neidig's pursuits include the development and publication of laboratory experiments for introductory chemistry.

Cynthia R. Johnston, adjunct instructor in chemistry.

B.S., Lebanon Valley College.

Johnston is focusing her efforts on the development of science curricula for the elementary school classroom and on instructing those studying to teach in the elementary school.

John L. Snyder, adjunct assistant professor of chemistry.

Ph.D., Villanova University.

Linda F. Ebright, adjunct assistant professor of chemistry.

M.S., University of Pittsburgh.

DEPARTMENT OF EDUCATION

The Department of Education prepares students for both elementary and secondary teaching. Post-baccalaureate certification is also available for those who wish to become elementary or secondary school teachers or for those already certified who want to add elementary or secondary education to an existing certificate. Dual certification, at both the elementary and secondary levels, or in more than one secondary area, is possible; however, such certification requires meticulous attention to scheduling and often requires additional semesters.

The Education Department is intent on preparing well-rounded and qualified graduates who will exercise genuinely professional and personal leadership roles in the schools and communities where they will work.

Education Program

Degree Requirements:

There is no major in education.

Minor: EDU 110, GPY 212; one of ELM 270, ELM 341, ELM 361; one of ELM 250, ELM 332, GPY 111; one of EDU 310, 346, SED 420; ELM 280 or SED 280, 1-3 credits (16-18 credits).

Courses in Education (EDU):

110. Foundations of Education. A study of the legal, social, historical and philosophical foundations of American education correlated with a survey of the principles and theories of influential educators. Includes required field practicum. 3 credits.

310. The Education of the Exceptional Child. An introduction to current research and practices concerning the range of exceptionailities in children. The course includes attention to policies, legislation, programs, methods and materials. Various resource personnel are invited to address pertinent issues. The course includes a minimum of one hour per week field experience in local programs designed to meet the needs of exceptional children. Prerequisites: EDU 110, PSY 100 or PSY 210, and permission of instructor. Limited to teacher certification candidates only. 3 credits.

346. Educational Technology and Instructional Media. An introduction to the media and technology used for educational communications. Includes materials, equipment, characteristics, and competencies for effective use. Covers a wide range of media from chalk to computers. Limited to sophomore education majors or to other teacher certification candidates with permission of the instructor. 3 credits.

Elementary Education (Teacher Certification) Program

The Education Department is committed to preparing elementary education majors who have a thorough grounding in the disciplines they will teach within the context of a strong liberal arts foundation. The program includes intensive training in the content and methodologies of all elementary school subjects.

The field-centered component in the program provides extensive and carefully sequenced opportunities to work with teachers and children in a variety of school settings during all four years of preparation for teaching. The Education Department has established strong relationships with local public, parochial and private schools. Majors spend an average of two hours per week each semester in various public school classrooms, observing teachers and children, aiding, tutoring, providing small-group and whole-class instruction, and completing tasks on increasingly challenging levels of involvement. Seniors spend the fall semester in full-time student teaching with cooperating teachers who have been carefully chosen for that role. Additional opportunities are provided for our students to work in nursery schools, child care centers, Head Start programs, middle schools, and in classes for exceptional children.

Degree Requirements:

Degree: Bachelor of Science with a major in elementary education.

Major: Elementary education majors must take: EDU 110, 310; ELM 220, 250, 270, 280, 332, 341, 342, 344, 361, 362, 499; ART 401; GPY 111; HIS 125; MAS 100 or equivalent; PSY 100 or 210, 220, 321 (60 credits).

Note: Students who are pursuing teacher certification must complete 12 credit hours of ELM 440 Student Teaching in addition to completing all requirements for the major in Elementary Education.

Courses in Elementary Education (ELM):

220. Music in the Elementary School. A course designed to aid elementary education majors in developing music skills for the classroom, including the playing of instruments, singing, using notation, listening, movement, and creative applications. 3 credits. {Cross-listed as Music 220.}

250. Mathematics in the Elementary School. A study of basic preschool to sixth grade mathematical concepts with major emphasis on the NCTM Standards, the integration of media and technology, writing across the curriculum, student assessments, and exceptional children. Attention is given to the development of hands-on teaching activities, simulations, and experiences which can be utilized effectively with any classroom population. 3 credits.

260. Principles and Practices in Early Childhood Education. An introduction to contemporary research, theories, programs, curricula, methods, and materials in early childhood education, nursery school through grade 2. Includes required field experience in a local early childhood center. Limited to teacher certification candidates or permission of the instructor. 3 credits.

270. Children's Literature. A study of literature for children from infants through grade 8, including extensive classroom examination of books, poetry, storytelling, and resources in children's literature. Includes participation in the public or school library programs for children and youth. Limited to teacher certification candidates or permission of the instructor. 3 credits.

280. Field Practicum in the Elementary School. Supervised field experiences in appropriate school settings. Prerequisite: permission. 1–3 credits.

332. The Physical Sciences in the Elementary School. A study of basic concepts in general science, earth and space science, physical and biological science, and environmental studies based on the Pennsylvania Science Benchmarks for Science Education. The course emphasizes the experiential nature of science in the elementary classroom with special attention to materials, media and technology, writing across the curriculum, authentic assessment, exceptional children, and methodologies appropriate for kindergarten through sixth grade students. The course integrates a multidisciplined, whole language approach to teaching physical and environmental science. 3 credits.

341, 342. Teaching of Reading I, II. The fundamentals of teaching children to read from the readiness programs of early childhood education to the more comprehensive techniques required to teach reading in all subject areas of the curricula in elementary and middle schools. Effective reading programs, methods, and materials are examined first hand. Includes during each semester one hour per week of reading enrichment for selected elementary school students. Prerequisite: ELM 270. 3 credits per semester.

344. Health Education in the Schools. Provides the background information and skills teachers need to implement comprehensive school health education. The course includes information on the six categories of risk behavior identified by the Center for Disease Control and Prevention. The course examines the objectives of Healthy People 2000, the eight components in comprehensive school health, the Safe Schools Act, the National Health Education Standards, comprehensive school health programs, the 10 content areas of health education, and instructional strategies and materials appropriate to the teaching of health in today's schools. Attention is given to the ethical, moral, and religious issues often associated with this area of the school curriculum. 3 credits.

361. Language Arts in the Elementary School. The content, methods and materials for teaching oral and written language beginning with early childhood: listening, speaking, creative and practical writing, creative dramatics, handwriting, grammar and usage, spelling, reading, and thinking. The course emphasizes media and technology, authentic assessment, and exceptional children's language development. The course is designed to assist preservice teachers in helping children to communicate effectively and responsibly through a process writing, whole language, literature based, multidisciplined approach to teaching. 3 credits.

362. Social Studies in the Elementary School. An examination of the content, methods and role of social studies in the elementary school, beginning with early childhood. The curriculum is examined from two vantage points: the daily lives of children as they relate to developing values and attitudes and the planned study of people as they live and have lived in our world. The development of a teaching unit and the examination of learning resources are required. 3 credits.

440. Student Teaching. Each student spends an entire semester in an area school under the supervision of a carefully selected cooperating teacher. Open to seniors only. A major grade point average of at least 2.0 and a cumulative grade point average of at least 2.50 are required. Prerequisites: EDU 110; GPY 111; HIS 125; PSY 220,321; ELM 220, 250, 270, 280, 332, 341, 342, 344, 361, 362, and permission of the Education Department faculty. 12 credits.

499. Senior Seminar. Special topics related to current concerns in education are researched and presented by the students in the course. Issues related to teaching and to further professional growth are explored. Students are required to do extensive and varied kinds of formal and informal writing on assigned and self-selected topics in education. 3 credits.

Secondary Teacher Certification Program

Students pursuing secondary teacher certification are prepared for teaching by completing an intensive program in the departmental major(s) of their choice in conjunction with a carefully sequenced professional education component within the Education Department. Both the major program and the professional education component are completed within the context of a strong foundation in the liberal arts.

Departmental majors may seek certification in biology, chemistry, English, French, German, Spanish, mathematics, physics, and social studies.

Opportunities are provided candidates to observe and to teach in junior high and high school settings prior to the full-time student teaching semester. Cooperating teachers are selected through a process involving college faculty, public school personnel, and the student teachers, thus assuring the most beneficial placements possible.

Degree Requirements:

There is no major in education for those interested in secondary teaching. Students complete the requirements in their chosen major and the designated professional education courses.

Degree: Bachelor of Arts or Bachelor of Science in the chosen major. (Majors: biology, chemistry, English, French, German, Spanish, mathematics, physics, and social studies.)

Secondary Teacher Certification: Students seeking secondary certification must complete the approved program in the chosen major and 21 credits in education courses, consisting of EDU 110 and SED 420, 430 and 440. SED 280 or SED 430 must be taken in the fall or spring semester immediately preceding the student teaching semester. SED 280 should be taken at least once prior to SED 440. SED 420 and 440 comprise the student teaching semester of the senior or post graduate year.

Courses in Secondary Education (SED):

280. Field Practicum in the Secondary School. Supervised field experiences in appropriate school settings. Designed to offer practical experiences for prospective secondary teachers or students planning an educational ministry. Prerequisites: permission. 1–3 credits.

420. Human Growth and Development. A survey of human characteristics, research in developmental psychology and their implications for teaching and learning at the middle school and secondary school levels. Prerequisite: EDU 110; secondary teacher certification candidate; junior or senior status; approval of instructor. 3 credits.

430. Practicum and Methods. A study of the basic principles and procedures for middle school and secondary classroom management and instruction. Prerequisite: EDU 110; secondary teacher certification candidate; junior or senior status; approval of instructor. 3 credits.

440. Student Teaching. Students spend an entire semester in an area school under the supervision of a carefully selected cooperating teacher. Open to seniors only. Requirements are:

- (1) a cumulative grade point average of at least 2.50
- (2) a grade point average of at least 2.00 in the major field
- (3) completion of all courses required of the major for student teaching
- (4) completion of professional education courses required for student teaching
- (5) approval of the major adviser and of the Education Department faculty.

Prerequisites: EDU 110, SED 430. SED 420 is normally taken concurrently with SED 440. 12 credits.

Geography Program

A course in geography is offered to acquaint students with the physical and cultural aspects of the world in which they live and to introduce them to geography as a discipline. The course is recommended for all students who wish to broaden their understanding of the world.

Course in Geography (GPY):

111. Physical Geography and Its Impact. A survey of the physical aspects of the earth and its impact on life through the Six Themes of Geography developed by the National Geography Standards. Attention is given to the solar system, the earth's movements, climate, weather, landforms, ecology, environmental awareness, and the processes that form and change the earth's surface. Students explore, through different modes of media and technology and a variety of hands-on activities, the impact that physical geography has on their everyday lives. A Whole Language, multidisciplined approach to teaching geography is presented. Requirement for elementary education certification. Prerequisite: Elementary Education major or permission of instructor. 3 credits.

Faculty

Susan L. Atkinson, associate professor of education.

Ed.D., Temple University.

She teaches method courses in mathematics, science, social studies, and language arts, plus courses in the foundations of education and physical geography. Supervises student teachers. Her research interests are in the area of matching student/teacher learning styles to increase academic achievement. Her interests include multidisciplined curricula, classroom management and early childhood education. She is the adviser for the college's professional teaching organization, which includes secondary, elementary, and music education majors.

Michael A. Grella, professor of education. Chairperson.

Ed.D., West Virginia University.

He teaches courses in children's literature, reading, early childhood education, and exceptional children. He coordinates reading-related practica in the public schools and supervises student teachers. He serves as the department's chief liaison with public school personnel and with the Pennsylvania Department of Education. He maintains a special interest in the acquisition of literacy at the primary grade levels and in learning disabilities.

Donald E. Kline, assistant professor of education.

Ed.D., Lehigh University.

He teaches courses in educational foundations, educational technology, secondary methodology, and supervises student teachers. He serves as the director of instructional design and technology in the department to develop and promote the integration of the computer and other instructional media in all phases of teacher preparation.

Dale E. Summers, associate professor of education.

Ed.D., Ball State University.

He teaches courses in educational foundations, world cultural geography, American cultural geography, elementary social studies, secondary school curricula and methodologies, and adolescent development. He serves as supervisor of student teachers and helps to monitor pre-student teaching field experiences. He maintains a particular interest in special education for the emotionally disturbed at both the elementary and secondary level.

Linda L. Summers, instructor in education.

M.A., Ball State University.

She serves as the director of elementary and secondary field experiences for the Education Department. She teaches courses in educational foundations, language arts, social studies, and health. She supervises elementary and secondary student teachers. Areas of interest in education include early childhood education, thematic approaches to learning, the use of integrated curriculum, and cooperative learning.

DEPARTMENT OF ENGLISH

English Program

The major in English introduces students to the humanistic study of language. While English majors may choose to concentrate in literature, communications or secondary education, the basis for all concentrations is the study of literature. All majors also learn the skills of clear, concise and correct expression as well as of effective collection, organization, and presentation of material. Such study prepares the student for graduate work in literature or communications, or for professional study in such fields as law or theology. Graduates of the Department of English are also prepared to work in journalism, teaching, editing, public relations, publishing, advertising, government, and industry.

Departmental Honors: English majors with a major GPA of 3.5 at the end of the junior year are eligible to apply for departmental honors. Details are available from the department chairperson.

The English Department offers a major program with concentrations in literature, communications, and secondary education, as well as minors in literature, communications and theater.

Degree Requirements:

Degree: Bachelor of Arts with a major in English.

Major: Core requirements: ENG 120 ; three from 221–229 (at least two of the three must be from 221-226); 321; 341 or 342; (18 credits). Students must choose one of the concentrations below in addition to the core.

Literature concentration: Three additional survey courses (ENG 221–229); 370; three from among 330, 350, 390-literature courses (39 total credits).

Communications concentration: ENG 099; ENG 140; five additional communications courses (ENG 202-218, 310–315, 390-communications); three credits of ENG 400 (39 total credits).

Secondary Education concentration: One additional survey course from ENG 221–229 (the total of four surveys must include at least three from 221-226); two from among ENG 202, 213, and 218; three from among 330, 350, 370, 390; and ENG 360 (39 total credits).

To be certified by the state, secondary education concentrators must also complete EDU 110, SED 420, SED 430, and SED 440.

Minor (Literature): ENG 120; ENG 221 or 222; two from ENG 225, 226, 227, 228, 229; two additional 300-level literature courses (18 credits).

Minor (Communications): ENG 120; ENG 140; ENG 221 or 222; three additional communications courses (202-218, 310-315, 390-communications) (18 credits).

Minor (Theater): ENG 120; ENG 202; ENG 204; ENG 341; ENG 342; one drama-related course from among 330, 350, or 390 (18 credits).

Courses in English (ENG):

099. Internship Portfolio. A formal collection of the student's previous communications-oriented work, to be submitted to the department as part of the student's formal request to take ENG 400 (Internship). Graded Satisfactory/Unsatisfactory. Offered every semester. 0 credits.

101, 102. English as a Second Language: Speaking, Reading, and Listening I, II. Emphasis on advanced speaking, reading, and listening skills for students for whom English is the second language. The second semester continues work on the same skills. 3 credits.

103, 104. English as a Second Language: Writing I, II. Emphasis on constructing the academic essay for students for whom English is the second language. The second semester continues work on the same skills. 3 credits.

111, 112. English Communications I, II. Both semesters help the student find her or his own voice within the demands and expectations of public expression. Both courses emphasize the development of clear, organized and rhetorically effective written prose. 112 also emphasizes speaking, reading, and research skills. Prerequisite for 112: 111 or permission of chairperson. 3 credits.

120. Introduction to Literature. An introduction to literary genres and to the basic methodology, tools, terminology and concepts of the study of literature. Usually offered every semester. 3 credits.

140. Introduction to Mass Communications. An introduction to career-oriented uses of language and to the skills used universally by reporters, editors, advertising copywriters, public relations personnel, and technical writers. Usually offered fall semester. 3 credits.

202. Theater Workshop. A workshop in the elements of theater with classroom practice in production of scenes and whole plays. Usually offered fall semester. 3 credits.

204. Theater Production and Performance. Instruction in all aspects of producing and performing a full-length play. Preference given to students who have completed ENG 202 (Theater Workshop). Usually offered spring semester. 3 credits.

210. Management Communications. The development of writing, speaking and listening skills for business management. Prerequisite: ENG 111 and 112, or permission of the instructor. Usually offered alternate spring semesters. 3 credits.

213. Journalism. The development of the basic skills of journalistic writing such as interviewing, covering meetings, gathering and reporting news, and writing features according to standard formats and styles; the course also covers legal and ethical aspects of journalism. Writing intensive. Prerequisite: ENG 111 and 112, or permission of the instructor. Usually offered fall semester. 3 credits.

214. Creative Writing: Poetry. A workshop in writing poetry. Usually offered alternate fall semesters. 3 credits.

215. Creative Writing: Fiction. A workshop in writing short fiction. Usually offered alternate fall semesters. 3 credits.

216. Technical Applications in Writing. The development of writing, speaking, and illustrating skills to convey specialized, often technical information to a non-technical audience. Prerequisite: ENG 111 and 112 or permission of the instructor. Usually offered alternate spring semesters. 3 credits.

218. Oral Communication. Introduction to informative, persuasive, and other types of oral communication, with emphasis on the student's own performance as well as the judgment of others' performance. Usually offered alternate spring semesters. 3 credits.

221. Survey of American Literature I. A survey of selected major American authors from the colonial period to about 1900. Writing intensive. Usually offered fall semester. 3 credits.

222. Survey of American Literature II. A survey of selected major American authors from about 1900 to the present. Writing intensive. Usually offered spring semester. 3 credits.

225. Survey of English Literature I. A survey of selected major English authors from the Middle Ages to about 1800. Writing intensive. Usually offered alternate spring semesters. 3 credits.

226. Survey of English Literature II. A survey of selected major English authors from about 1800 to the present. Writing intensive. Usually offered alternate spring semesters. 3 credits.

227. World Literature I. A survey of selected major writers from earliest literate history to about 1000 A.D. About two-thirds of the literature studied will come from western Europe, the rest from non-western cultures. Usually offered fall semester. 3 credits.

228. World Literature II. A survey of selected major writers from about 1000 to about 1800 A.D. About two-thirds of the literature studied will come from western Europe, the rest from non-western cultures. Usually offered spring semester. 3 credits.

229. World Literature III. A survey of selected major non-writers from about 1800 to the present. About two-thirds of the literature studied will come from Europe and Russia, the rest from non-western cultures. Usually offered fall semester. 3 credits.

310. Advanced Journalism. Builds upon basic journalistic skills by requiring students to read and write long pieces of investigative and feature reporting. Writing intensive. Prerequisite: ENG 213. Usually offered alternate spring semesters. 3 credits.

312. Writing for Radio and TV. Theory and technique of writing news and features for broadcast media. Editing and rewriting press association dispatches, gathering local news, recording interviews and preparing newscasts and feature programs. Prerequisite: ENG 140. Usually offered alternate fall semesters. 3 credits.

313. Advertising Copy and Layout. Principles and techniques of copywriting; selection and presentation of sales points; creative strategy in production of layouts. Prerequisite: ENG 140. Usually offered alternate spring semesters. 3 credits.

314. Public Relations. Purposes and methods of modern public relations as practiced by business and industry, organizations and institutions, trades and professions. Public opinion evaluation. Planning of public relations programs. Prerequisite: ENG 140. Usually offered alternate fall semesters. 3 credits.

315. Editing. Editing theory and exercises in copyreading, rewriting and headlining. Writing intensive. Prerequisite: ENG 140. Usually offered alternate spring semesters. 3 credits.

321. History and Grammar of the English Language. An examination of the evolution of English phonology, morphology, syntax, and vocabulary, including current conventions and usage. Usually offered fall semester. 3 credits.

330. Literary Genres. A study of one of the various forms of literature, such as the narrative poem, the lyric poem, the novel, the short story, drama, film, the essay, biography and autobiography. The genre will vary from semester to semester. May be repeated for credit when it involves a genre the student has not previously studied. Writing intensive. Prerequisite: Eng 120 or a 200-level survey (ENG 221-229). Usually offered every semester. 3 credits.

341. Shakespeare I. A concentrated study of early Shakespearean drama, especially the comedies and the histories. Writing intensive. Prerequisite: ENG 120 or a 200-level survey (ENG 221-229). Usually offered alternate spring semesters. 3 credits.

342. Shakespeare II. A concentrated study of late Shakespearean drama, especially the tragedies and the romances. Writing intensive. Prerequisite: ENG 120 or a 200-level survey (ENG 221-229). Usually offered alternate spring semesters. 3 credits.

350. Major Authors. Intensive study of one or two major American or British authors. Recent subjects have included Faulkner, Joyce, Woolf, Oates, Morrison, Chaucer, Milton, Pound, and Williams. The authors will vary from semester to semester. May be repeated for credit. Writing intensive. Prerequisite: ENG 120 or a 200-level survey (ENG 221-229). Usually offered fall semester. 3 credits.

360. The Teaching of English in Secondary Schools. The teaching of writing and literature in the junior high and high school classroom, exploring literary, pedagogical, and composition theory as they apply to actual teaching practice. Writing intensive, prerequisites: ENG 120 and EDU 110. Usually offered alternate spring semesters. 3 credits.

370. Literary Theory and Its Applications. An introduction on both a theoretical and a practical level to a number of major theoretical and critical approaches to literature. Prerequisite: ENG 120. Usually offered alternate spring semesters. 3 credits.

390. Special Topics. Topics vary from semester to semester. Recent topics have included Native American Literature, Myths and Their Meaning, Revolutions, Sports and Literature, Irish Literature, Gender and Communication, the Vietnam War in American Literature. May be repeated for credit. Prerequisite: ENG 120 or a 200-level survey (ENG 221-229). Usually offered every semester. 3 credits.

400. Internship. Practical and professional work experience, on or off campus, related to the student's career interests, involving both on-site and faculty supervision. Generally limited to juniors and seniors. Prerequisites: ENG 099; permission of the chairperson; application form from Registrar's office must be completed prior to registration. 1-12 credit hours.

Faculty

Philip A. Billings, professor of English.

Ph.D., Michigan State University.

He teaches courses in world and American literature as well as poetry and fiction writing. His publications include poems and articles in various magazines and two books of poems based on the lives of people in the immediate area.

Marie G. Bongiovanni, assistant professor of English.

M.L.A., University of Pennsylvania.

She teaches courses in editing, public relations, journalism, and modern literature. Experienced in journalism, business, and free-lance writing, she recently completed a summer program in nature writing at Bennington College.

Phyllis C. Dryden, associate professor of English.

D.A., State University of New York at Albany.

She teaches courses in management communication, linguistics, communications theory, and American literature. In addition she directs the department internship program. She has published numerous poems, stories, and journalistic articles; and she has won two NEH Summer Seminar grants for literary study.

Gary Grieve-Carlson, professor of English. Chairperson.

Ph.D., Boston University.

He teaches courses in American literature, American studies, editing, and grammar. He has been a Fulbright Junior Lecturer in Germany and has published several articles on American cultural criticism and twentieth century poetry.

John P. Kearney, professor of English.

Ph.D., University of Wisconsin.

He teaches courses in Shakespeare, British literature, and technical writing as well as an interdisciplinary course in revolutions. He is a Victorian literature scholar who is writing a book on Charles Dickens.

Mary K. Pettice, assistant professor of English.

Ph.D., University of Houston.

She teaches courses in journalism, creative writing, and modern British and American literature. She also advises the student newspaper. Experienced in the newspaper and publishing worlds, she has also published poetry and short stories.

Kevin B. Pry, lecturer in English.

Ph.D., The Pennsylvania State University.

Dramaturge for local theater companies, he teaches courses in world literature, dramatic literature, and theater workshop and production. He also advises the student drama club.



*The English Department offers a major with concentrations in literature,
communications and secondary education.*

DEPARTMENT OF FOREIGN LANGUAGES

The study of a foreign language has three aims: to develop fluency in the basic communication skills, to provide an understanding of the cultural heritage of the people who use the language, and to understand language as the fundamental medium by which humankind thinks and interacts.

The Department of Foreign Languages prepares the language major for a career in a variety of fields: teaching, diplomatic and government service, foreign trade, business and social service. For many of these careers the study of a foreign language is often combined with majors in other disciplines.

The department encourages students to avail themselves of the college's opportunities for foreign travel and study, particularly Lebanon Valley College programs in Cologne, Germany; Montpellier, France; and Salamanca, Spain.

The Department of Foreign Languages offers majors in French, German and Spanish, secondary teacher certification in foreign language, as well as minors in the three languages. The department also offers the major in International Business jointly with the Management Department.

Foreign Languages Program

Degree Requirements:

No major is offered in foreign language. Majors are offered in French, German and Spanish.

Elementary or Secondary Teacher Certification: Students seeking elementary or secondary certification in a foreign language must take FLG 360 and 21 credits in education courses including EDU 110 and SED 420, 430 and ELM or SED 440.

Courses in Foreign Language (FLG):

260. Approaches to Culture. A survey of contemporary life in French, German and Spanish speaking countries. Topics may include customs, values, social structures, geography, and current issues. Taught in English. 3 credits.

350. Linguistics. A study of the field of linguistics. Investigates language as a system of signs and as a culturally conditioned behavior. 3 credits.

360. The Teaching of Foreign Language in Schools. A comprehensive study of modern teaching methods, with emphasis on practicing basic classroom skills for elementary through secondary school level instruction. Prerequisite: FRN 202, GMN 202, or SPA 202. 3 credits.

French Program

Degree Requirements:

Degree: Bachelor of Arts with a major in French.

Major: 24 credits in French above the intermediate level, FLG 350 (27 credits) For teaching certification, FLG 360 is required.

Minor: 18 credits in French above the elementary level. Courses in advanced conversation and composition as well as in culture are strongly recommended.

Courses in French (FRN):

101, 102. Elementary French I,II. Introductory courses in French. Aimed at developing basic communicative proficiency in French. Also offers insights into French-speaking cultures. 3 credits.

201, 202. Intermediate French I,II. Review of material typically covered in a first-year French course. Aimed at building students' proficiency in all four language skills – listening, speaking, reading and writing – and at enhancing their knowledge of the cultures of French-speaking people. Prerequisite: FRN 102 or equivalent. 3 credits.

300. Advanced Conversation. Intensive practice in spoken French. Discussions on a wide range of topics related to French life and contemporary society. Prerequisite: FRN 202 or equivalent. 3 credits.

310. Advanced Grammar & Composition. Intensive practice in written French. Development of advanced writing skills through composition assignments based on contemporary French writing and issues. Prerequisite: FRN 202 or equivalent. 3 credits.

320. Business French. A study of the language of business and business practices of France and French-speaking countries. Prerequisite: FRN 202 or equivalent. 3 credits.

340. The Sounds of French: Intensive Listening Comprehension Skills. An intensive listening comprehension class in which students are exposed to, and tested in, many registers of spoken French: stories, lectures, movies, advertising, radio, television, conversation, announcements, instructions, etc. The objective is to provide students with a listening immersion in the Francophone world. Prerequisite: FRN 202 or equivalent. 3 credits.

350. Issues in French Culture. Discussion of an important issue in France from different points of view. Taught in French. Prerequisite: FRN 202 or equivalent. 3 credits.

410. French Literature of the Middle Ages and Renaissance. A study of medieval French literature to 1600. Works from the medieval epic and courtly romance through Renaissance philosophical essays. Development of advanced communicative skills through literature will be promoted. Prerequisite: FRN 300 or 310 or permission. 3 credits. (Writing Intensive)

420. French Literature of the 17th Century. A study of the spirit and principal authors of French Classicism with a special emphasis on the theater of Corneille, Racine and Molière. Prerequisite: FRN 300 or FRN 310 or permission. 3 credits. (Writing Intensive)

430. French Literature of the 18th and 19th Centuries. A study of the main ideological currents of the 18th and 19th centuries: the faith in reason, the emergence of pre-romanticism, romanticism and realism. Emphasis on the works of Voltaire, Montesquieu, Diderot, Rousseau, l'Abbé Prévost, Marivaux, Hugo, Flaubert, Balzac, Zola, and Baudelaire. Prerequisite: FRN 300 or FRN 310 or permission. 3 credits. (Writing Intensive)

440. French Literature of the 20th Century. A study of contemporary society as reflected in the literary evolution from Proust to the *Nouveau Roman* and *le théâtre de l'Absurde*. Such writers as Giraudoux, Anouilh, Malraux, Sartre, Camus, Ionesco, Becket will be studied. Prerequisite: FRN 300 or FRN 310 or permission. 3 credits. (Writing Intensive)

450. Modern Theatre and Poetry of France. A study of theater and poetry of the 19th and 20th centuries. Prerequisite: FRN 300 or FRN 310 or permission. 3 credits. (Writing Intensive)

German Program

Degree Requirements:

Degree: Bachelor of Arts with a major in German.

Major: 24 credits in German above the intermediate level; FLG 350. (27 credits). For teaching certification, FLG 360 is required.

Minor: 18 credits in German above the elementary level. Courses in advanced conversation and composition as well as in culture are strongly recommended.

Courses in German (GMN):

101, 102. Elementary German I,II. Introductory courses in German. Aimed at developing basic communicative proficiency in German. Also offers insights into German-speaking cultures. 3 credits.

201, 202. Intermediate German I,II. Review of material typically covered in a first-year German course. Aimed at building students' proficiency in all four language skills – listening, speaking, reading and writing – and at enhancing their knowledge of the cultures of German-speaking people. Prerequisite: GMN 102 or equivalent. 3 credits.

203, 204; 303, 304; 403,404. Language & Culture I, II. An immersion course on three levels offered in Cologne, Germany. German in context with a grammar review, practical exercises and discussion of cultural issues. Placement determined in Cologne. Prerequisite: GMN 102 or equivalent. 3 credits.

310. Germany Past and Present. Studies the major epochs of German cultural history and describes the chief characteristics of present-day German society. Prerequisite: GMN 202 or equivalent. 3 credits.

316. Composition & Conversation. Intensive practice in the interactive skills of speaking and writing. Review of grammar and emphasis of practical situations. Prerequisite: GMN 202 or equivalent. 3 credits.

320. Business German. A study of the language of business and business practices of Germany and German-speaking countries. Prerequisite: GMN 202 or equivalent. 3 credits.

330. German Short Fiction. A reading course in the Cologne program for the intermediate student. Study of short texts to develop more advanced skills and introduce the techniques of literary analysis. Prerequisite: GMN 102 or equivalent. 3 credits.

350. Issues in German Culture. Study of a major issue from various points of view. Readings in German and English; discussion and writing in German and English. Prerequisite: GMN 202 or equivalent. 3 credits.

370. Techniques of Translation & Interpretation. Emphasizes the skills needed for accurate and idiomatic translation of German texts into English. Discussion of more complex grammatical structures. Prerequisite: GMN 202 or equivalent. 3 credits.

400-419. Readings in German. Works of fiction and nonfiction selected to explore a particular topic or theme. Prerequisite: GMN 202 or equivalent. 3 credits. (Writing Intensive)

460. Lyric Poetry. A study of German song from *minnesang* to contemporary rock. Involves both texts and music as appropriate. Prerequisite: GMN 202 or equivalent. 3 credits. (Area 5, Writing Intensive)

Russian Program

Degree Requirements:

Only coursework is offered in Russian.

Courses in Russian (RSN):

101, 102. Elementary Russian I, II. Introductory courses in Russian. Aimed at developing basic communicative proficiency in Russian. Also offers insights into Russian-speaking cultures. 3 credits.

201, 201. Intermediate Russian I, II. Continuation of first year. Aimed at building students' proficiency in all four language skills - listening, speaking, reading and writing - and at enhancing their knowledge of Russian culture. Prerequisite: RSN 102 or equivalent. 3 credits.

Spanish Program

Degree Requirements:

Degree: Bachelor of Arts with a major in Spanish.

Major: 24 credits in Spanish above the intermediate level; FLG 350 (27 credits). For teaching certification, FLG 360 is required.

Minor: 18 credits in Spanish above the elementary level. Courses in advanced conversation and composition as well as in culture are strongly recommended.

Courses in Spanish (SPA):

101, 102. Elementary Spanish I, II. Introductory courses in Spanish. Aimed at developing basic communicative proficiency in Spanish. Also offers insights into Spanish-speaking cultures. 3 credits.

201, 202. Intermediate Spanish I, II. Review of material typically covered in a first-year Spanish course. Aimed at building students' proficiency in all four language skills – listening, speaking, reading and writing – and at enhancing their knowledge of the cultures of Spanish-speaking people. Prerequisite: SPA 102 or equivalent. 3 credits.

300. Advanced Conversation. Intensive practice in spoken Spanish. Discussions on a wide range of topics related to Spanish life and contemporary society. Prerequisite: SPA 202. 3 credits.

310. Advanced Grammar & Composition. Discussion of more complex grammatical structures. Intensive practice in written Spanish. Development of advanced writing skills through composition assignments based on contemporary Spanish writing and issues. Prerequisite: SPA 202. 3 credits. (Writing Intensive)

320. Business Spanish. An introduction to the language of business and business practices. Prerequisite: SPA 202 or equivalent. 3 credits.

340. The Sounds of Spanish: Intensive Listening Comprehension. An intensive listening comprehension class in which students are exposed to, and tested in, many registers of spoken Spanish: stories, lectures, movies, advertising, radio, television, conversation, announcements, instructions, etc. The objective is to provide students with a listening immersion in the Hispanic world. Prerequisite: SPA 202. 3 credits.

350. Issues in Spanish Culture. Discussion of an important issue in Spain from various points of view. Taught in Spanish. Prerequisite: SPA 202 or equivalent. 3 credits.

360. Issues in Latin-American Culture. Discussion of an important issue in Latin America from various points of view. Prerequisite: SPA 202 or equivalent. 3 credits.

370. Techniques of Translation & Interpretation. Studies methods of translation and interpretation. Oral and written texts will be used to work both from Spanish to English and English to Spanish. Prerequisite: SPA 202. 3 credits.

410. Spanish Literature of the Middle Ages and Renaissance. A study of the outstanding

works of the period. Prerequisite: SPA 202 or equivalent. (Writing Intensive)

420. Spanish Literature of the Golden Age. A study of the major works of the period. Prerequisite: SPA 202 or equivalent. 3 credits. (Writing Intensive)

430. Spanish Literature and the Eighteenth and Nineteenth Centuries. Readings from the Enlightenment in Spain and an examination of the major works of romanticism and realism. Prerequisite: SPA 202 or equivalent. 3 credits. (Writing Intensive)

440. Spanish Literature of the Twentieth Century. A study of the literary movements of the century, starting with the Generation '98 and modernism. Prerequisite: 202 or equivalent. 3 credits. (Writing Intensive)

450. Latin-American Literature of the 20th Century. A study of the important writers of the century, with emphasis on recent developments. Prerequisite: SPA 202 or equivalent. 3 credits. (Writing Intensive)

460. The Age of Discovery. An examination of the Aztec, Mayan and Incan civilizations before 1492 and the philosophy of the Spanish explorers from 1492 on. Prerequisite: SPA 202. 3 credits. (Foreign Studies, Writing Intensive)

Faculty

Diane M. Iglesias, professor of Spanish. Chairperson.

Ph.D., City University of New York.

Iglesias teaches courses in Spanish language, and in Spanish and Latin American culture, civilization and literature. She has presented research papers in medieval balladry and the Spanish Golden Age theater at scholarly conferences. She is currently researching the modern Latin American novel and is particularly interested in the concept of "magical realism" as it applies to the works of Gabriel García Márquez.

James W. Scott, professor of German.

Ph.D., Princeton University.

Scott teaches German and courses in the culture, civilization and literature of German-speaking countries. His most recent scholarly presentations have ranged from Kafka's short fiction to cabaret in the GDR and communicative testing. At present he is preparing a new translation of *Iwein*, an Arthurian epic by Hartmann von Aue. He chairs a state selection committee for the Congress-Bundestag Youth Exchange Program and is a member of the American Association of Teachers of German task force on distance learning.

Joëlle L. Stopkie, associate professor of French.

Ph.D., Bryn Mawr College.

She teaches courses in language, culture and literature and coordinates and supervises study programs in France. She is currently interested in methodology and Francophone studies.



Dr. Stopkie works with students to arrange study-abroad opportunities.

Angel T. Tuninetti, assistant professor of Spanish.

M.A., Washington University.

Tuninetti teaches Spanish language classes and Latin American culture and literature. His special interest is South American travel literature of the colonial and nineteenth century periods.

Andrés Zamora, assistant professor of Spanish.

Ph.D., University of Southern California, Los Angeles.

Zamora teaches subjects from basic language to literature, art and culture of the Hispanic world. He has worked on Medieval literature, the Golden Age Comedia, Cervantes and the Modern Latin American Novel. He is studying the poetics of the Spanish Novel in the 19th and 20th centuries.

Theresa Bowley, adjunct instructor in French.

M.A., Middlebury College.

Bowley teaches courses in French language, culture and civilization. Her special interests include French culture, French language structure and French cooking.

Rita Gargotta, adjunct instructor in Spanish.

Diploma, University of Saville.

Gargotta teaches courses in Spanish language, culture and contemporary society.

Léonie Lang-Hambourg, adjunct assistant professor of German.

M.A., University of Oregon, Diploma Interpreter and Translator, Müncher Dolmetscherschule.

Experienced as an interpreter and translator, she teaches beginning and intermediate German and courses in advanced German grammar and style, as well as conversation and composition, translation and business German.

DEPARTMENT OF HISTORY AND AMERICAN STUDIES

By examining human behavior in the past, the study of history can help people better understand themselves and others. Students of history and American Studies also learn how to gather and analyze information and present their conclusions in clear, concise language.

An undergraduate degree in history or American studies can lead to a career in teaching at the college or high school level, law, government, politics, the ministry, museums and libraries, journalism or editing, historical societies and archives, historical communications or a number of other professions.

American Studies Program

Degree Requirements:

Degree: Bachelor of Arts with a major in American Studies.

Major Core: AMS 111, 211, 223, 229, 311, 400; HIS 100, 253; (22 credits)

In addition to the core, each major must select one of the following concentrations for completion of the degree requirements:

Professional/Curatorial Concentration: ART 205; one course from the following: ART 201, 203; one course from the following: ENG 221, 222; HIS 211, 261, 262; one course from the following: MSC 120, PHL 240, REL 120. (43 credits)

Cultural Agency Administration Concentration: ACT 161; BUS 230, 340, 420; ENG 140, 210, 314. (43 credits)

Minor: AMS 111, 211, 223 or 229, 311; HIS 100, 253; one course from ENG 321, 322, PHL 240; one course from HIS 261, 262; and one course from ART 205, MSC 120, REL 120 (25 credits)

Courses in American Studies (AMS):

101. Introduction to American Cultures. An interdisciplinary, cultural study of fundamental American institutions, social patterns, cultural myths, and cultural icons in historical perspective. Field trips to national and regional sites included. 3 credits.

111. Introduction to American Studies. An interdisciplinary approach to the study of America's heritage and the distinguishing features of the American mind and character. 3 credits.

211. American Folklore. A study of the historical growth of American folklore; such genres as folk art, folk music, and folk speech; contemporary expressions, including regional and ethnic variations; and the dynamics of folk performance in socio-cultural context. 3 credits.

223. American Thought and Culture. A study of American intellectual history focusing on cultural criticism as represented in such schools of thought as Puritanism, Enlightenment,

Rationalism, Transcendentalism, utopianism, the Southern Agrarians, The Progressives, the New York Intellectuals, Marxism, feminism, and the New Journalism. 3 credits.

229. Culture and Conflict in Modern America. An examination of the social, political, economic, and cultural upheaval of the 1960's and 1970's in the historical context. 3 credits.

230. American Folk Religion. A study of the folk traditions of selected American denominations and sects and of the theological implications of secular folklore. Emphasis will be placed on field work as well as on analysis. 3 credits.

311. American Science and Technology. A study of American science and technology and their interrelations with economic, cultural, political and intellectual developments. Prerequisite: Any laboratory science course. 3 credits.

400. Internship. Field experience at a cultural agency. Ordinarily intended for juniors and seniors. Prerequisite: GPA of 2.50 in major and permission of department chair. Minimum of three credits.

History Program

Degree Requirements:

Degree: Bachelor of Arts with a major in history.

Major: HIS 100, 101, 102 or 111, 112 as appropriate; 125, 126, 211, 251, 253; two upper-level courses in United States history; two upper-level courses in European history; and two courses from 271, 273, 275, 277, 279. (40 credits)

Secondary Education Concentration: Students shall complete successfully the history major plus HIS 360: the Teaching of History and Social Studies in Secondary Schools. Students shall take HIS 111 and 112. Students shall complete also the Social Studies core and 21 credits of secondary education courses including EDU 110, SED 420, 430, and 440. A GPA of 2.5 is required for entrance into the secondary certification program. (43 credits)

Professional Studies Concentration: Students shall complete successfully the history major plus a minimum of three credits in HIS 500; Independent Study. Students shall take HIS 101 and 102: Western Civilization in the major. (43 credits)

Minor: HIS 100, 101, 102 or 111, 112 as appropriate; 125, 126, 251, 253 and one upper-level course in European history and one from 271, 273, 275, 277, 279. (25 credits)

Degree: Bachelor of Arts with a major in historical communications.

Major: HIS 100, 111, 112, 125, 126, 211, 251, 253, 400; one upper-level course in United States history; one upper-level course in European history; and one course from 271, 273, 275, 277, 279; ENG 140, 213, 216, 310 and one from ENG 204, 312, 315. (49 credits)

Courses in History (HIS):

100. Historical Methodology. An introductory course in historical research and writing with emphasis on using computer technology in research and professional activity. Topics include finding and using historical databases, on-line bibliographies, primary sources on the World Wide Web and CD-Rom, computer mapping and participating in historical discussion groups. Includes extensive hands-on training. 1 credit.

101. Western Civilization to the 14th Century. The development of the western world from its Near Eastern and Mediterranean origins to the eve of the Renaissance. 3 credits.

102. Western Civilization since the 14th Century. A study of how life in the late 20th century has been influenced by historical developments in Europe and America, including the growth of science, the rise of nation states, social classes and values, and changing views of the world. 3 credits.

111. World History to the 14th Century. A study of world history from earliest times to the 16th century with emphasis on the world's great cultural traditions and the major transformation of the world in terms of cultural, social, political, and technological change. 3 credits.

112. World History since the 14th Century. A study of world history from 1500 to the present with an emphasis on the growing connectedness of the major cultural traditions. 3 credits.

125. United States History to 1865. The story of America from Columbus through the Civil War. 3 credits.

126. United States History Since 1865. The story of America from Reconstruction to the present. 3 credits.

201. The Ancient World. The beginnings of civilization with analysis of the ancient Near East including the Tigris-Euphrates Valley, Egypt, Asia Minor, and Assyria; and with particular emphasis on Greece and Rome. 3 credits.

203. The Middle Ages. A study of the thousand year period ending in 1500 that saw the emergence of a Christian European civilization with particular emphasis on political, social, economic, and cultural trends. 3 credits.

205. Early Modern Europe. The Renaissance, Reformation, Scientific Revolution, and the development of national political states, especially in the 17th and 18th centuries. 3 credits.

206. Revolution & Nationalism, 1789–1914. A study of the effects of the French Revolution and the Industrial Revolution on Europe. Particular attention is paid to the rise of class antagonisms and national rivalries. 3 credits.

207. Europe in the 20th Century. Developments in Europe from 1900 to the present are investigated, with special focus on the role of Germany, the Nazi Era and the post-World War II conditions. 3 credits.

211. Historical and Cultural Geography. A study of the various geographic regions of the world and how the natural environment has influenced historical and cultural development. 3 credits.

225. The American Revolution. An in-depth study of why Americans declared their independence and how they won the Revolution and worked to build a republic in a hostile world of monarchies. Particular attention is paid to major issues on which historians of the period disagree. 3 credits.

226. Age of Jefferson & Jackson. How the old republican ideal of a virtuous agrarian society struggled to confront the new age of economic modernization, social diversity, and sectional tension. 3 credits.

227. Civil War and Reconstruction. A study of how sectional divisions over slavery led to a bloody war and a bitter postwar effort to reshape Southern society. 3 credits.

251. History and Historians. The first half of this course covers the lives and ideas of the great historians from ancient times to the modern world; the second half of the course covers recent interpretations of American history. 3 credits.

253. The Business of History. An introduction to professional, curatorial and management principles and applications in various segments of the history industry. Students examine the basics of archival management, museum curatorship, oral history, corporate history and historical communications. 3 credits.

261. Gender, Race, Ethnicity and Class in America to 1860. An analysis of the changing role and status of women, the African-American and native American experience, the underclass experience and the impact of immigration, from the European Conquest to the Civil War. 3 credits.

262. Gender, Race, Ethnicity and Class in America since 1860. An analysis of the changing role and status of women, the African-American and native American experience, the underclass experience and the impact of immigration and ethnicity from the Civil War to the 1990s. 3 credits.

271. Modern China and Japan. An analysis of political, economic and cultural institutions of China and Japan with special emphasis on the western impact on these institutions after 1500. 3 credits.

273. Modern Africa. African civilization from its origins in the ninth century to the present day, with emphasis on the impact of colonialism, regional distinctions, and the emergence of independent states. 3 credits.

275. Modern Latin America. Latin American civilization from its origins to the present, with emphasis on the impact of colonialism, the emergence of independent states, relationships with the United States, and the modern regional distinctions. 3 credits.

277. The Modern Middle East. Middle Eastern civilization from the rise of Islam to the present, with emphasis on the Arabian peninsula, the Fertile Crescent, Iran, Turkey, and Egypt, particularly after 1914. The origins and development of the modern state of Israel are also analyzed. 3 credits.

279. Modern South Asia. Indian sub-continent civilizations from the 16th century to the present with emphasis on the impact of the Mughal empire, the impact of western colonial control, the crisis of the 19th and 20th centuries, the evolution of nationalism resulting in independence and partition, and with major reference to the contemporary nations and cultures of India, Pakistan, Bangladesh, and Sri Lanka. 3 credits.

301. European Social History. An inquiry into the lives and experiences of ordinary folk. Topics include women, laboring classes, and popular culture. 3 credits.

307. Modern Russia. The development of Russia and the Soviet Union from Kievan beginnings to the present, with emphasis upon the period since 1600. 3 credits.

325. American Business and Labor to 1900. An analysis of the role of business in America from the colonial period to 1900. Topics include managerial leadership, entrepreneurship, the development of the American economy, and the relationships between business, government, trade unionism and society. 3 credits.

326. American Business and Labor since 1900. An analysis of the role of business in America during the 20th century. Topics include managerial leadership, entrepreneurship, the development of the American economy, and the relationships between business, government, trade unionism, and society. 3 credits.

327. American Military History. An analysis of American military institutions from Old World tradition to the post-Persian Gulf era with emphasis on the U.S. Army. 3 credits.

329. Women in America. The role and status of women in American society from colonial to modern times with emphasis on women's economic roles; class, ethnicity and race in women's lives; women and the family; women and reform movements; women's values; women's entry into the professions; cultural expression by women; and feminism. 3 credits.

330. The African-American Experience. The history of the African-American experience from the origins of slavery to modern times with emphasis on slavery, the perpetuation of African cultural and social heritage, transition to freedom, segregation and disenfranchisement, civil rights and black power movements, and changing cultural expressions. 3 credits.

360. The Teaching of History and Social Studies in Secondary Schools. A course for those preparing to teach history and social studies at the secondary level. Topics include issues and trends in secondary education, history of historical pedagogy, professional development and course enrichment resources, teaching techniques, the uses of technology and student

motivational techniques. 3 credits. Required of all history majors seeking secondary certification.

400. Internship. Field experience in a historical setting. Ordinarily intended for juniors and seniors. Prerequisite: GPA of 2.50 in major and permission of department chair. Minimum of three credits.

Faculty

Howard L. Applegate, professor of history and American studies. Chairperson.

Ph.D., Syracuse University.

His teaching is focused on American history, with a strong specialization in business history. Applegate is a historical analyst of the American automotive and grocery chain retailing industries.

James H. Broussard, professor of history.

Ph.D., Duke University.

Broussard teaches American history and historiography. His research and publications concentrate on the Jefferson–Jackson era, the South, and American politics. He formerly served as executive director of the Society for Historians of the Early American Republic.

Donald E. Byrne Jr., professor of American Studies and religion, director of American Studies Program.

Ph.D., Duke University.

His teaching centers on the history of Christianity and religion in America. His scholarship has focused on American folk religion; other interests include religion and literature, peace studies, and mysticism.

Richard A. Joyce, associate professor of history.

M.A., San Francisco State College.

He teaches modern European history and is interested in social and intellectual history.

Diane E. Wenger, adjunct assistant professor of history and American Studies.

M.A., The Pennsylvania State University.

Wenger teaches American Studies and American history. Her research interests include American material culture, American business history with an emphasis on the economic/social history of the Federal period. She is pursuing additional graduate study at the University of Delaware.

DEPARTMENT OF MATHEMATICAL SCIENCES

The Lebanon Valley College Department of Mathematical Sciences has long offered a rigorous mathematics program within the context of a liberal arts education. Today an increasing national need for mathematically prepared individuals has made our program even more attractive. Computer scientists, secondary school mathematics and computer science teachers, college professors in mathematical sciences, actuaries, operations research analysts, and statisticians are in high and continuing demand. In addition, the mental discipline and problem solving abilities developed in the study of mathematics have long been recognized as excellent preparation for numerous and varied areas of work or study.

The department offers majors in actuarial science, computer science, applied computer science, and mathematics, and minors in computer science and mathematics.

Five students from this department have earned Fulbright Scholarships for graduate study abroad. Graduates have earned Ph.D.s in economics, physics, statistics and computer science as well as mathematics. Other graduates have completed law school. Many are Fellows of the Society of Actuaries and the Casualty Actuarial Society. Regularly, many of the department's students are named to the *Who's Who in American Colleges and Universities*.

Actuarial Science Program

An actuary is a business professional who uses mathematical training to define, analyze and solve financial and social problems. Actuaries are employed by insurance companies, consulting firms, large corporations, and the federal and state governments. The Society of Actuaries and the Casualty Actuarial Society establish and monitor the professional qualifications of actuaries through a series of rigorous examinations.

The Actuarial Science program at Lebanon Valley College was established in the mid 1960s and is coordinated by Professor Hearsey, an Associate of the Society of Actuaries. Well over 100 of the college's alumni work in the actuarial profession. The coursework is selected to provide a foundation in mathematics, accounting and economics and to prepare students for courses 100–150 of the Society of Actuaries syllabus and parts 1–4 of the Casualty Actuarial Society syllabus. A student may prepare for additional examinations through independent study. Lebanon Valley is the only small undergraduate liberal arts college in North America with such an extensive actuarial science major. The college has had nearly 100 percent placement of actuarial science graduates, with graduates employed by over 50 organizations.

Degree Requirements:

Degree: Bachelor of Science with a major in actuarial science.

Major: Three of ASC 385, 481, 482, 484; CSC 125; MAS 111, 112, 202, 222, 371, 372, 471 and one of MAS 363 or 335; ECN 101, 102; ACT 151, 152 or 161, 162. (52 credits.) The Course 100/Part 1 examination of the actuarial societies must be passed before the end of the semester preceding the graduation semester.

Courses in Actuarial Science (ASC):

385. The Theory of Interest. Measurement of interest, the time value of money, annuities, amortization and sinking funds, bonds and related securities, depreciation and capitalized cost. Prerequisite: MAS 112. 3 credits.

481, 482. Actuarial Mathematics I and II. Survival distributions and life tables; life insurance; life annuities; net premiums; premium reserves; multiple life functions; multiple decrement models; valuation theory for pension plans; the expense factor; and non-forfeiture benefits and dividends. Prerequisite: Core. (MAS 111,112, 202, 222; CSC 125). 3 credits each.

484. Casualty Actuarial Mathematics. An introduction to mathematical techniques of casualty actuarial work including credibility theory, rate making and loss reserving. Prerequisite: Core. 3 credits.

Computer Science Program

With new facilities and a wide range of computer equipment, the department offers a flexible program in computer science. Two distinct majors offer opportunities and challenges for the theoretically minded, and for those whose interests are directed towards applications.

The program in computer science was recently revised and all courses were modified to reflect the latest changes in the field, both in hardware and in software. The result is a compact sequence of courses of introductory material and in specialized advanced topics that allow immediate adaptation of the state of the art, and to the interests of the students.

The departmental computer lab is equipped with a graphics workstation, networked Unix and personal computers, and a wide variety of other equipment. Network connections with other labs, classrooms, and the Internet, make a wide variety of systems easily accessible. Independent study and internship opportunities encourage diversity and flexibility in preparation of leaders in the rapidly changing information world.

Degree Requirements:

Degree: Bachelor of Science degree with a major in applied computer science; Bachelor of Science degree with a major in computer science.

Major: (Applied Computer Science) CSC 125, 144, 249, 282, 321, 448, 481 or 344, 400 or 500; ENG 210 or 216; MAS 111 or 161, 251, 270; 15 coordinated hours in an area of computer application to be arranged with adviser (51–53 credits).

Major: (Computer Science) CSC 125, 144, 249, 282, 321, 344, 481, 482 or 448, 400 or 500; ENG 210 or 216; MAS 111, 112, 202, 222, 251, 270 (52 credits).

Minor: (Computer Science) CSC 125, 144, 249, 282, and one CSC course numbered 300 or higher; MAS 161,251 (21 credits).

Note: No course outside of the core (MAS 111, 112, 202, 222, CSC 125) may be used to meet the requirements of more than one major or minor within the Department of Mathematical Sciences.

Courses in Computer Science (CSC):

125. Computer Tools: An Introduction to Computer Science. Introduction to fundamental concepts of computer science through exploration of application software. Topics include: information storage, retrieval, and communication, user interfaces, algorithms, spreadsheet, data bases, and expert systems. 3 credits.

144. Programming with JAVA. Introduction to programming in JAVA. Prerequisite: CSC 125. 3 credits. A student may not receive credit toward graduation for CSC 144 after completing CSC 249 or the equivalent.

249. Advanced Programming with C++. Features of the C language. Functions, strings, pointers, structures, files, objects, libraries and multiple modules. Prerequisite: CSC 144. 3 credits.

282. Data Structures. Lists, stacks, queues, trees, tables and networks. Prerequisite: CSC 249, MAS 251. 3 credits.

321. Survey of Computer Languages. Classification of languages and experience with examples such as Ada, Prolog, Small Talk, LISP, HTML and SQL. Prerequisite: CSC 144. 3 credits.

344. Computer Architecture with MACRO. The organization of computers. Topics include instruction sets, registers, memory, devices and interrupts. Prerequisite: CSC 249. 3 credits.

448. Database Management. Database structure and implementation. Prerequisite: CSC 282. 3 credits.

481, 482. Advanced Topics in Computer Science I, II. Topics to be selected from current areas of interest and concern in computer science. Possible topics include graphics, compiler construction, operating systems, networks, and artificial intelligence. Prerequisites: CSC 282; MAS 251. 3 credits per semester.

Mathematics Program

The increasing role of technology in modern society and the broadening scope of the scientific paradigm have generated a growing need for mathematicians in business, industry and government. Also, the national goal of improving the mathematical competence of high school graduates has created a demand for teachers and professors in mathematics that will not subside for many years.

The department, highlighted in the Mathematical Association of America's 1995 publication, *Models that Work*, continues its reputation of preparing its students for a variety of mathematical specialties by maintaining high standards of performance. A full roster of traditional courses, seminars, and independent study prepares our students for a career or graduate study.

A group of core courses sets the foundations of mathematical knowledge and gives the student time to discover the direction of his or her interest. Advanced courses prepare the student for graduate study, the teaching profession, and a variety of careers in statistics, operations research, and research and development in industry and business.

Close cooperation with other departments allows the student also to have a major or minor in another field to enhance the opportunities after graduation.

Degree Requirements:

Degree: Bachelor of Science with a major in mathematics.

Major: MAS 111, 112, 202, 222, 251; five additional MAS courses numbered 200 or higher subject to: no more than one numbered below MAS 300, at least one of 270 or 372, at least one of 322, 325, 411, 412, at least one of 335, 363; MAS 498, MAS 499; CSC 125 (39 credits).

Minor: MAS 161, 162; 202 or 251; 222; three courses from CSC 144 or MAS courses numbered 200 or higher (22 credits).

The mathematics minor is not available for actuarial science majors. No course outside of the core (MAS 111, 112, 202, 222; CSC 125) may be used to meet the requirements of more than one major or minor within the Department of Mathematical Sciences.

Secondary Teacher Certification: Students seeking secondary certification in mathematics must complete a mathematics major which includes MAS 322, 325, 360; must take CSC 144; and must take EDU 110, and SED 420, 430 and 440.

Courses in Mathematics (MAS):

100. Concepts of Mathematics. A study of a variety of topics in mathematics. Topics may include: patterns and inductive reasoning, calculators, number systems, nature of algebra, interest, installment buying, and geometric concepts. 3 credits.

102. Pre-Calculus, Algebra and Trigonometry. A review of college algebra and trigonometry. Algebraic expressions and equations, inequalities, absolute value, exponents, logarithms, functional notation, graphs of functions, systems of equations, modeling and work problems, angular measurement, trigonometric functions, identities, formulas, radian measure, graphs of trigonometric and inverse functions. 3 credits. A student may not receive credit toward graduation after completing MAS 111, 161, or the equivalent.

111, 112. Analysis I, II. A rigorous calculus sequence for departmental majors and other students desiring a theoretical presentation of elementary calculus. Prerequisite: placement testing or MAS 102. 5 credits per semester. A student may not receive credit toward graduation after completing MAS 161, 162 or the equivalent.

150. Finite Mathematics. Introduction to finite mathematics with emphasis on economic and business applications. Include sets, lines and systems of equations, matrices, linear program-

ming, probability, statistics, Markov processes, mathematics of finance. 3 credits. A student may not receive credit toward graduation after completing MAS 161, 162, or the equivalent.

161. Calculus I. The first course of a calculus sequence with emphasis on applications. Functions and limits, differentiation, integration, introduction to logarithm and exponential functions. Prerequisite: placement testing or MAS 102. 3 credits. A student may not receive credit toward graduation after completing MAS 111 or the equivalent.

162. Calculus II. Continuation of topics from MAS 161. Additional applications of differentiation and integration, logarithm and exponential functions, inverse trigonometric and hyperbolic functions, improper integrals, Hôpital's rule, infinite series, and conic sections. Prerequisite: MAS 161. 3 credits. A student may not receive credit toward graduation after completing MAS 112 or the equivalent.

170. Elementary Statistics. Elementary descriptive and inferential statistics. Topics include graphical representation, measure of central tendency, probability, binomial distribution, normal distribution, hypothesis testing, and estimation. 3 credits. A student may not receive credit toward graduation after completing MAS 372 or the equivalent.

202. Foundations of Mathematics. Introduction to logic, set theory and methods of proof. Prerequisite: MAS 112 or MAS 162. 3 credits.

261. Calculus III. Continuation of Calculus I and II. Prerequisite: MAS 112 or MAS 162. 3 credits.

222. Linear Algebra. Vectors, matrices, and systems of equations. Prerequisite: MAS 112 or MAS 162. 3 credits.

251. Discrete Mathematics. Introduction to mathematical ideas used in computing and the information sciences logic, boolean algebra, sets and sequences, matrices, combinatorics, induction, relations, and finite graphs. Prerequisite: MAS 111 or MAS 161. 3 credits. A student may not receive credit toward graduation after completing MAS 202 and 371.

266. Differential Equations. First and second order differential equations, partial differential equations. Prerequisite: MAS 261. 3 credits.

270. Intermediate Statistics. An advanced version of MAS 170. Prerequisite: MAS 111, 161 or permission of instructor. 3 credits. (Credit may not be received for both MAS 170 and 270.)

322. Abstract Algebra. Fundamentals of groups, rings, fields. Prerequisite: MAS 222. 3 credits.

325. Geometry. Axiomatic development of Absolute, Euclidean and non-Euclidean geometries. Prerequisite: MAS 112 or MAS 162. 3 credits.

335. Operations Research I. Linear programming, dynamic programming, integer programming, queueing theory, project scheduling, stochastic simulation, and decision analysis. Prerequisite: MAS 222, 371. 3 credits. A student may not receive credit toward graduation for both MAS 335 and BUS/ECN 322.

336. Operations Research II. Continuation of topics from MAS 335, and selected topics from goal programming, network analysis, game theory, stochastic processes, inventory theory, forecasting, and reliability. Prerequisite: MAS 335. 3 credits.

360. The Teaching of Mathematics in Secondary Schools. A course for those preparing to teach mathematics at the secondary level. Topics include: issues and trends in mathematics education, history of mathematical pedagogy, enrichment and professional development resources, teaching techniques, and use of technology. Prerequisite: Core. 3 credits.

363. Numerical Computation. A survey with topics from: finite arithmetic, root-finding algorithms, numerical integration and differentiation, interpolation, systems of equations, splines, numerical solution of differential equations, Monte Carlo methods, optimization, least squares. Prerequisite: MAS 112 or MAS 162 and CSC 125. 3 credits.

371. Mathematical Probability. Random variables, discrete and continuous and distributions. Prerequisite: MAS 112. 3 credits.

372. Mathematical Statistics. A theoretical introduction to estimation, tests of hypotheses, regression, and analysis of variance. Prerequisite: MAS 371. 3 credits.

411. Real Analysis. The development of 19th century analysis: convergence and divergent series; limits, continuity, differentiability, and integrability; Fourier series. Prerequisite: Core. 3 credits.

412. Functions of a Complex Variable. Analytic functions. Cauchy theorem, conformal mapping. Prerequisite: Core. 3 credits.

471. Applied Statistics. An application oriented presentation of analysis of variance, regression, analysis, and time series analysis. Prerequisite: MAS 372. 3 credits.

498. Problem Solving/Recreational Math. A survey of interesting, challenging, and entertaining problems with emphasis on problem solving techniques. Prerequisite: Core. 1 credit.

499. Famous Problems. A survey of famous problems from mathematics; solved and unsolved, ancient and modern. Prerequisite: Core. 1 credit.

Faculty

J. Patrick Brewer, assistant professor of mathematical sciences.

Ph.D., University of Oregon.

One of only two graduate students on the University of Oregon staff selected for their 1997 University wide graduate teaching award, Brewer joins the Lebanon Valley faculty as a dedicated, caring teacher. His particular mathematical interests lie in the area of reflection groups.

Jenny E. Dorrington, assistant professor of mathematical sciences.

Ph.D., Northwestern University.

After three years on the faculty at Colorado College, where she was sponsored as a NExT fellow, Dorrington brings to Lebanon Valley a varied teaching background in mathematics and computer science. An algebraic topologist by specialty, she has experience with women's studies and other multidisciplinary courses.

Michael D. Fry, professor of mathematical sciences.

Ph.D., University of Illinois.

An avid practitioner of computer science and an accomplished mathematician, Fry heads the Computer Science Program and is the adviser for Computer Science students. Trained as a mathematician, he has special interests in graphics, fractals, operating systems and computer architecture.

Bryan V. Hearsey, professor of mathematical sciences. Chairperson. Coordinator, Actuarial Science Program.

Ph.D., Washington State University.

Coordinator of the Actuarial Science program and Department Chairman, Hearsey is an Associate of the Society of Actuaries. He is an active member of the academic actuarial community including membership on the SOA Career Encouragement Committee, and is the SOA Liasion to the Mathematical Association of America.

Mark A. Townsend, professor of mathematical sciences.

Ed.D., Oklahoma State University.

A winner of the Lindback Award for Distinguished Teaching, Townsend is recognized for his exceptional interest and concern for students. His interests include numerical analysis, teaching methods and classroom innovation for both mathematical science majors and math students in general. He also enjoys teaching elementary computer science.

Kenneth F. Yarnall, assistant professor of mathematical sciences

Ph.D., University of South Carolina.

Yarnall has interests ranging from pure mathematics to computer science to the history and philosophy of science. He teaches in both the mathematics and computer science programs and is the advisor of the Math Club.



The Department of Mathematical Sciences offers a vigorous mathematics program within the context of a liberal arts education.

Timothy M. Dewald, adjunct instructor in mathematical sciences.

M.Div., Andover Newton Theological School.

Dewald is interested in the history of mathematics and enjoys teaching students with “math anxiety.” He teaches the pre-calculus course and concepts of mathematics. He is a winner of the Knisely Teaching award.

John F. Nau Jr., adjunct assistant professor of mathematical sciences.

M.S., Renssalaer Polytechnic Institute.

Interested in mathematical modeling in teaching systems management. Teaching specialty is applied mathematics. Nau teaches evening courses.

MILITARY SCIENCE PROGRAM

The Military Science Program adds another dimension to a Lebanon Valley College liberal arts education with courses that develop a student's ability to organize, motivate and lead.

Participation in military science courses during the freshman and sophomore years results in no military obligation. Courses during these years orient students on the various roles of Army officers. Specifically, these courses stress self-development: written and oral communication skills, leadership, bearing and self-confidence.

Individuals who elect to continue in the program during the junior and senior years will receive a commission as a second lieutenant in the United States Army, The U.S. Army Reserve or The Army National Guard, upon graduation. Then they will serve three months to four years in the active Army, depending upon the type of commission.

Options are available for those individuals who encounter scheduling conflicts or who desire to begin participation after their freshman year. Contact the Professor of Military Science, Dickinson College, 717-245-1221, for further information.

Program participants may take part in various enrichment activities during the academic year: rappelling, rifle qualification, cross-country skiing, white-water rafting, leadership exercises, land navigation, orientation trips and formal social functions. Program participants may also apply for special training courses during the summer: airborne, air assault and northern warfare schools.

Financial Assistance: Books and equipment for military science courses and the ROTC program are provided free of charge to all cadets. All juniors and seniors in the ROTC program (Advanced Course) and scholarship cadets are paid a tax-free subsistence allowance of \$150 per month and receive certain other benefits.

Scholarships: Army ROTC scholarships based on merit are available. Scholarships are awarded in four varieties or tiers. Tier I provides \$12,800 annually in tuition assistance coupled with \$450 in book fees and \$150 per month (\$1,500 annually) in spending money. Tier II provides \$9,000 annually with the same book fee and spending allowance. Tier III provides \$5,000 annually, with the same book fee and spending allowance. Tier IV provides \$3,000 annually and the monthly spending allowance. Cadets and other Lebanon Valley students may compete for three-year and two-year scholarships. Recipients agree to a service obligation. Lebanon Valley will provide a supplement to the Tier I and II scholarships. For more information, contact the Professor of Military Science at 717-245-1221.

Corresponding Studies Program: Students participating in an off-campus study program in the United States or abroad may continue participation in either the Army ROTC Basic Course or Advanced Course and receive the same course credit and benefits as a student enrolled in the on-campus program. Scholarship students also are eligible to participate.

Advanced Leadership Practicum: The practicum consists of a five-week summer training program at an Army installation that stresses the application of military skills to rapidly changing situations. Participants are evaluated on their ability to make sound decisions, to direct group efforts toward the accomplishment of common goals and to meet the mental and physical challenges presented to them. Completion of this practicum is required prior to commissioning and is normally attended between the junior and senior years. Participants receive room, board, travel expenses, medical care, and pay.

Degree Requirements:

Requirements: MIL 101, 102, 201, 202, 301, 302, 401, 402; HIS 327.

Courses in Military Science (MIL):

101, 102. Introduction to Military Science. Emphasizes developing self-confidence and bearing. Instruction and weekly practical training in the basic skills of map reading, rappelling, weapons, communications, first aid, tactical movements, customs, courtesies, public speaking, and leadership. Meets one hour per week; two or three Saturdays of adventure training; and one formal social event each semester. 1 credit each semester.

201, 202. Application of Military Science. Advanced instruction in topics introduced in the first year. Participation in operations and basic tactics to demonstrate leadership problems and to develop leadership skills. Meets two hours per week each semester; two or three Saturdays of adventure training; and one formal social event each semester. 1 credit each semester.

301, 302. Advanced Application of Military Science. Emphasis on leadership. Situations require direct interaction with other cadets and test the student's ability to meet goals and to get others to do the same. Students master basic tactical skills of the small unit leader. Meets two hours per week and selected weekends each semester. Prerequisite: Open only to Advanced Course cadets. 1 credit each semester.

401, 402. Command and Staff. Emphasis is placed on developing planning and decision-making capabilities in the areas of military operations, logistics, and administration. Meets two hours per week and selected weekends each semester. Prerequisite: Open only to Advanced Course cadets. 1 credit each semester.

Faculty

Harry D. Owens, professor of military science.

J.D., University of Detroit School of Law. Lieutenant Colonel, United States Army.

Owens has over 20 years active duty military service as an Armor Officer. He is the primary instructor for the 400 level courses (MS IV's).

Daniel A. Daley, assistant professor of military science.

B.S., Appalachian State University. Captain, United States Army.

Daley is a Field Artillery Officer with over 10 years active duty military service. He serves as the Operations and Training Officer and is the primary instructor for the 300 level courses (MS III's).

Robert F. Hepner, assistant professor of military science.

B.S., Mansfield University of Pennsylvania. Captain, United States Army.

Hepner is a Field Artillery Officer with over 10 years active duty military service. He serves as the Recruiting Operations Officer and is the primary instructor for the 100 level courses (MS I's).

Edward J. Siegfried, assistant professor of military science.

B.S., North Carolina Agricultural and Technical State University. Captain, United States Army. Siegfried is a Field Artillery Officer with over 10 years active duty military service. He serves as the Administrative Officer and is the primary instructor for the 200 level courses (MS II's).

Johnny E. Jackson, senior instructor in military science.

Master Sergeant, United States Army.

Jackson is an Infantry Non-Commissioned Officer with over 20 years active duty military service. He assists with instruction for the 100 and 200 level courses (MS I's & II's).

Victor L. Cobb, training and operations non-commissioned officer.

Sergeant First Class, United States Army.

Cobb is an Engineer Non-Commissioned Officer with over 18 years active duty military service. He serves as the Training NCO and assists with instruction for the 300 level courses (MS III's).

The Military Science Program adds another component to a liberal arts education with courses that develop a student's ability to organize, motivate and lead.



DEPARTMENT OF MUSIC

Students in the Department of Music may major in one of three areas: music, music education, or music recording technology. Each student, regardless of major, is required to take a core of courses in music theory and music history. Each student also completes additional course work particular to his/her area of interest.

Music Program

Music majors will exhibit proficiency at the piano and in voice, each to be determined by jury. Precise requirements for these proficiencies and the recital attendance requirement are found in the Department of Music Student Handbook. To prepare for proficiency juries, students can take MSC 510 and/or 520. Music majors will be in at least one major performing ensemble (identified as either Marching Band, Symphonic Band, College Choir, Concert Choir, or Symphony Orchestra) each fall and spring semester. All students may earn up to 12 credits for ensemble participation. They will enroll in private study on their principal instrument/voice during each fall and spring semester.

Students registered for private instruction in the department are not permitted to study in that instructional area on a private basis with another instructor, on or off campus, at the same time.

Degree Requirements:

The Bachelor of Arts in music (B.A.) is designed for those students preparing for a career in music with a strong liberal arts background. All B.A. candidates will take an hour lesson per week in their principal performance medium. Students in the jazz studies concentration will take 530 private applied and 530 jazz studies each semester to fulfill this requirement. The theory/composition concentration students will take 530 private applied and 530 individual composition each semester to fulfill this requirement. B.A. in music students are expected to give a one-half junior recital, and a full senior recital. These are given in consultation with and at the recommendation of their private instructor and a pre-performance jury. Concentrations identified in the Department of Music Student Handbook include: piano, organ, voice, instrumental, sacred music, jazz studies, and theory/composition.

Degree: Bachelor of Arts in music.

Majors: Core courses in all music degree programs are: MSC 099, 115, 116, 117, 118, 215, 217, 246, 328, 341 and 342. MSC 530 for B.S. and B.M. candidates, and MSC 540 for B.A. candidates. In addition, music majors will be in either MSC 601, 602, 603 or 604 each semester, exceptions noted previously.

Music (B.A.): Core courses plus: Piano concentration: MSC 216, 306, 316, 406 and 600; Voice concentration: MSC 216, 233, 326 and 327; Organ concentration: MSC 216, 316, 351, and 352; Instrumental concentration: MSC 216, 345, 403, 405 and 416; Sacred Music concentration: MSC 216, 347, 351 or 334, and 422; Jazz Studies concentration: MSC 120, 218, 416 and 500: Senior Project; Theory/Composition concentration: MSC 216, 315, 329, 416 and 500: Senior Composition Project.

Minor: MSC 099 (two semesters), 100, 115, 116, 117, 341 or 342 plus one music literature elective: MSC 120, 200, 341 or 342. Minors also take MSC 530 for four semesters and must participate in a music ensemble for four semesters.

Student Recital

Student recitals are of inestimable value to all music students in acquainting them with a wide range of the best music literature, and in developing musical taste and discrimination. Performing in a recital provides the experience of appearing before an audience and helps to develop self reliance and confident stage demeanor. Students at all levels of performance ability appear on regularly scheduled student recitals depending on their degree program, performance readiness, and in consultation with the private teacher.

Courses in Music (MSC):

099. Recital Attendance. Designed for music majors and minors and graded on a satisfactory/unsatisfactory basis. Music core course. 0 credits.

100. Introduction to Music. For the non-music major, a survey of Western music designed to increase the individual's musical perception. 3 credits.

110. Class Piano for Beginners. 1 credit.

111. Class Guitar for Beginners. Student provides their own instrument. 1 credit.

115. Harmony I. A study of the rudiments of music and their notation. Harmonization of melodies and basses with fundamental triads. Analysis. Music core course. 2 credits.

116. Harmony II. A study of diatonic tonal harmony, including all triads and seventh chords, nonharmonic material and elementary modulation. Music core course. 2 credits.

117. Ear Training and Sight Singing I. The singing and aural recognition of intervals, scales, triads and simple harmonic progressions. Music core course. 2 credits.

118. Ear Training and Sight Singing II. A continuation of MSC 117, emphasizing clef reading, modality, modulation and more complicated rhythmic devices and harmonic patterns. Music core course. 2 credits.

120. American Music History. A historical survey of American music emphasizing stylistic developments and illustrative musical examples from colonial times to the present. Includes American musical theater, jazz, folk and popular styles. 3 credits.

123. Brass I. A study of the trumpet and trombone. Emphasis on pedagogical techniques. 1 credit.

124. Brass II. A study of the remainder of the brass family (horn, baritone, tuba). Emphasis on pedagogical techniques. Mixed brass ensemble experience. 1 credit.

127. *Percussion I.* A study of the snare drum. 1/2 credit.

200. *Topics in Music.* Designed primarily for the non-music major, the course will focus on genre and period studies. 3 credits.

215. *Harmony III.* A study of chromatic tonal harmony, including secondary dominants, augmented sixth chords, tertian extensions, altered chords and advanced modulation. Music core course. 2 credits.

216. *Harmony IV.* A study of 20th century compositional techniques, including modal and whole-tone materials, quartal harmony, polychords, atonality, serialism and various rhythmic and metric procedures. 2 credits.

217. *Ear Training and Sight Singing III.* A continuation of MSC 118, emphasizing chromatic materials and more complex modulations, chord types, rhythms and meters. Music core course. 2 credits.

218. *Jazz Theory.* A study of jazz theory, including notation, extended chords, improvisation and practice. Prerequisites: MSC 115, 116, and 215. 2 credits.

220. *Music in the Elementary School.* A course designed to aid elementary education majors in developing music skills for the classroom, including the playing of instruments, singing, notation, listening, movement, and creative applications. 3 credits. {Cross-listed as Elementary Education 220.}

228. *Percussion II.* A study of the remainder of the percussion instruments (timpani, bass drum and others). 1/2 credit.

231. *Woodwind I.* A study of the woodwind family (flute, oboe, saxophone, bassoon). 1 credit.

232. *Woodwind II.* A continuing study of the woodwind family. 1 credit.

233. *Diction.* An introduction to the pronunciation of singer's English, German, French, Italian, and Latin, utilizing the International Phonetic Alphabet. Required of voice concentration majors, the course is open to other students with permission of the instructor. 2 credits.

246. *Principles of Conducting.* Principles of conducting and baton technique. Students conduct ensembles derived from class personnel. Music core course. 2 credits.

280. *Field Practicum in Music Education.* Supervised field experiences in appropriate settings. Required pass/fail. Prerequisites: EDU 110 and permission. 1–3 credit(s).

306. *Piano Literature.* A survey of the development of the piano and its literature with emphasis on piano methods books and related materials. 2 credits.

315. Counterpoint. Introductory work in strict counterpoint through three- and four-part work in all the species. 2 credits.

316. Keyboard Harmony. Score reading and the realization of figured bass at the keyboard, transposition, and improvisation. The successful completion of a piano jury is required for admission to the course. 2 credits.

326. Vocal Literature. A survey of solo vocal literature with emphasis on teaching repertoire. Extensive listening is required. Students may have opportunities to perform the works studied. 2 credits.

327. Vocal Pedagogy. This course prepares the advanced voice student to teach private lessons at the secondary school level. Students are expected to develop vocal exercise procedures, become familiar with suitable teaching repertoire and apply teaching procedures in a laboratory situation. Selected writings in vocal pedagogy and voice therapy will be studied. 2 credits.

328. Form and Analysis I. A study through analysis and listening of simple and compound forms, variations, contrapuntal forms, rondo and sonata forms. Emphasis is placed primarily upon structural content. The course provides experience and skill in both aural and visual analysis. Music core course. 2 credits.

329. Form and Analysis II. A study through analysis and listening of fugal forms, suite, complex sonata forms and techniques for analysis of certain contemporary styles of music. 2 credits.

333. Methods and Materials, General Music: Elementary. A comprehensive study of general music teaching at the elementary school level, the philosophy of music education, varied approaches for developing conceptual learning and music skills, creative applications, and analysis of materials. 3 credits.

334. Choral Literature and Methods. A study of literature, materials, and approaches appropriate for choral and general music classes in grades 6–12. 3 credits.

335. Instrumental Literature and Methods. A study of literature, materials, philosophy, and methods applicable to the teaching of instrumental ensembles (including marching band) from elementary through high school levels. 3 credits.

336. Music Education Field Practicum. Students are placed in schools one hour per week where they are involved in a teaching/learning environment. 1 credit.

337. String I. A study of violin, viola, cello, string bass. 1 credit.

338. String II. A continuation of MSC 337. 1 credit.

341. History and Literature of Music I. A survey course in the history of Western music (in the context of world musics of various cultures), with emphasis on stylistic developments and illustrative musical examples, from early music through the Baroque era. Music core course. 3 credits.

342. History and Literature of Music II. A survey course in the history of Western music (in the context of world musics of various cultures), with emphasis on stylistic developments and illustrative musical examples, from the classical period to the present. Music core course. 3 credits.

345. Advanced Instrumental Conducting. Emphasis on practical work with instrumental groups. Rehearsal techniques are applied through individual experience. 2 credits.

347. Advanced Choral Conducting. Emphasis is on advanced technique with and without baton, score preparation, interpretation and pedagogy relating to choral organizations. 2 credits.

351. Organ Literature. A historical survey of representative organ literature from earliest times to the present day. 2 credits.

352. Organ Pedagogy. Designed with a practical focus, this course surveys various methods of organ teaching. Laboratory teaching and selection of appropriate technical materials for all levels are included. 2 credits.

401. Instrument Repair. A laboratory course in diagnosing and making minor repair of band and orchestral instruments. 2 credits.

403. Instrumental Pedagogy. A survey of teaching materials that relate to the student's performance area. Students may be expected to apply teaching procedures in a laboratory situation. 2 credits.

405. Instrumental Literature. A survey of literature (solo and chamber) that relate to the student's performance area. 2 credits.

406. Piano Pedagogy. A practical course that explores fundamental principles necessary to be an effective piano teacher. Subjects include practice techniques, memorization and the selection of appropriate technical materials for both beginners and advanced students. Laboratory teaching may be required of the student. 2 credits.

416. Orchestration. A study of instrumentation and the devices and techniques for scoring transcriptions, arrangements and solos for orchestra and band, with special emphasis on practical scoring for mixed ensembles as they occur in public schools. Laboratory analysis and performance. Scoring of original works. 2 credits.

422. Church Music Methods and Administration. A course that acquaints students with the church music program. Includes the development of a choir program, methods and techniques of rehearsal, budget preparation, and committee and pastoral relationships. 3 credits.

441. Student Teaching. Music education majors spend a semester in the music department of a school district under the supervision of cooperating teachers. Prerequisites:

- (1) a cumulative grade point average of at least 2.50 during the first six semesters (effective for students entering the program in the fall of 1995).
- (2) successful completion of piano and voice proficiency juries.
- (3) completion of music core courses and MSC 123, 124, 127, 216, 228, 231, 232, 316, 333, 334, 335, 336, including field experiences, 345 or 347 and EDU 110.
- (4) approval of the music faculty. Students are responsible for transportation; the college cannot ensure that student teaching placement can be in a local geographic area. 8/4 for a total of 12 credits.

500. Independent Study. See requirements on page 27. 1–3 credit(s).

510. Class Piano Instruction. Designed for music majors with minimal piano skills. Preparation for department piano proficiency requirements. 1 credit.

520. Class Voice Instruction. Designed for but not restricted to music majors with minimal vocal skills. Preparation for department voice proficiency requirements. 1 credit.

530. Individual Instruction (Voice, Piano, Orchestral and Band Instruments). 1 credit.

540. Individual Instruction (Voice, Piano, Orchestral and Band Instruments). 2 credits.

600. Accompanying. Under the guidance of a piano instructor the piano concentration student prepares accompaniments for recital performance. One credit per semester is given for one solo recital or two half recitals. A maximum of two credits, usually distributed over the last three years, may be earned. 1–2 credit(s).

Music Ensembles

601. Marching Band. The principal band experience during the fall semester open to all students by audition. Performs for home football games. Practical lab experience for music education majors. One semester satisfies one unit of physical activity of the general education requirements. Satisfies large ensemble requirement. 1 credit.

602. Symphonic Band. The principal band experience during the spring semester, open to all students by audition. The Symphonic Band performs original literature and arrangements of standard repertoire. Satisfies large ensemble requirement. 1 credit.

603. Symphony Orchestra. Various symphonic literature is studied and performed. In the second semester the orchestra accompanies soloists in a concerto–aria concert and on occasion combines with choral organizations for the performance of a major work. Open to all students by audition. Satisfies large ensemble requirement. 1 credit.

604. Concert Choir.

Sec. 1. Open to all students by audition, the Concert Choir performs all types of choral literature. In addition to local concerts, the Choir tours annually. Satisfies large ensemble requirement. 1 credit.

604. College Choir.

Sec. 2. Open to all students by audition, the College Choir performs all types of choral literature. Satisfies large ensemble requirement. 1 credit.

605. Chamber Choir. Open to all students by audition, the Chamber Choir performs chamber vocal literature from madrigals to vocal jazz. 1/2 credit.

610. Woodwind Ensembles.

Sec. 1. Clarinet Choir. 1/2 credit. Sec. 3. Woodwind Quintet. 1/2 credit.
Sec. 2. Flute Ensemble. 1/2 credit. Sec. 4. Saxophone Ensemble. 1/2 credit.

615. Brass Ensembles.

Sec. 1. Brass Quintet. 1/2 credit.
Sec. 2. Tuba Ensemble. 1/2 credit. Sec. 3. Low Brass Ensemble. 1/2 credit.

616. Percussion Ensemble. 1/2 credit.

620. String Ensemble. 1/2 credit.

625. Jazz Ensembles.

Sec. 1. Jazz Band. 1/2 credit. Sec. 2. Small Jazz Ensemble. 1/2 credit.

630. Chamber Ensembles.

Sec. 1. Guitar Ensemble. 1/2 credit.

635. Handbell Choir. 1/2 credit.

Music Education Program

The Bachelor of Science in music education (B.S.), approved by the Pennsylvania Department of Education and accredited by the National Association of Schools of Music, is designed for the preparation of public school music teachers, kindergarten through grade 12, instrumental and vocal. Piano and voice proficiencies for the music education major prepare the candidate to meet the standards of the Pennsylvania Department of Education and are administered by competency jury. Students participate in student teaching in area elementary and secondary schools. In all field experiences, as well as the student teaching semester, each student is responsible for transportation arrangements. During the student teaching semester, the candidate is not required to register for recital attendance, private lessons, or an ensemble.

Degree Requirements:

Degree: Bachelor of Science in music education.

Music Education (B.S.): Core courses plus: MSC 123, 124, 127, 216, 228, 231, 232, 316, 333, 334, 335, 336, 337, 338, 345 or 347, 416, 441; EDU 110; PSY 210 (recommended), 220; and a 2.50 cumulative grade point average. Music education majors are permitted to register for only one half-hour lesson in their principal performance medium during the student teaching semester if they are preparing a recital.

Music Recording Technology Program

The Bachelor of Music: Emphasis in Music Recording Technology (B.M.) is designed to prepare students for today's rapidly developing interactive media and music recording industries.

Degree Requirements:

Degree: Bachelor of Music: Emphasis in Music Recording Technology.

Music Recording Technology (B.M.): Core courses plus: MRT 219, 277, 278, 371, 372, 381, 382, 400, 471, 473, 474; PHY 103, 104, 203, 212, 350; and MAS 102 (or higher).

Courses in Music Recording Technology (MRT):

219. Ear Training for Recording Engineers. Critical listening skills are developed through class demonstration and ear-training exercises. Specific skills include hearing and discriminating frequencies, levels, processing, phase, etc. while listening musically to various production styles. Prerequisite: MRT 277. 1 credit.

277. Recording Arts I. Fundamentals of the recording arts including basic audio signal and acoustics theory, recording consoles, microphone design and technique, and signal processing. Students work in on-campus studios to complete lab assignments and projects. 3 credits.

278. Recording Arts II. Multitrack studio production techniques are developed through class discussion, demonstration, and project assignments. Theory and application of MIDI technology and its integration into music production is emphasized. Students use the studios for assignments and individual projects. Prerequisite: MRT 277. 3 credits.

371. Music Industry I. Topics discussed include: how the music business operates, songwriting and music publishing, copyright law, music licensing, record companies and recording contracts. 3 credits. Prerequisite: permission of the instructor. (Writing Intensive)

372. Music Industry II. Topics discussed include: music merchandising, retail, entrepreneurship, promotion, advertising, and distribution; music for telecommunications and new media. Prerequisite: MRT 371 and permission of the instructor. 3 credits. (Writing Intensive)

381. Tonmeister Recording. Students use the art of recording live ensembles, focusing on tonmeister recording techniques and philosophy. Prerequisite: MRT 278. 1 credit.

382. Music Production Seminar. Advanced issues of music production are discussed and practiced. These include musicality, client relations, engineering, budgets, etc. An individual emphasis is provided to help the student focus on these technical, artistic, organizational, and personal aspects. The course centers around completion of a major project. Prerequisite: MRT 381. 2 credits.

471. Digital Audio Technology. An in-depth examination of the principles and applications of digital audio in today's recording and interactive media industries. Topics discussed include: digital audio fundamentals, recording and reproduction systems theory, computer-based recording and editing, and audio for CD-ROM; and other new media applications. Prerequisite: MRT 382. 3 credits.

473. New Media Technology. The world of interactive media is explored. Students are exposed to a variety of multimedia technologies such as digital video, digital imaging, animation, 3-D modeling, and authoring systems. Industry-standard software packages such as Director, Premiere, Photoshop, Hypercard, etc. are used for demonstrations and projects. Prerequisite: MRT 473. 3 credits.

474. Interactive Media Production. Using developed skills in music, recording arts, and computer systems students will work with multimedia authoring systems to design and complete a project. Emphasis is on appropriate use of technology, creativity, and functionality of product design. Prerequisite: MRT 473. 3 credits.

400. Internship. Practical on-the-job experience provides students insight, exposure, and experience in an area of interest within the music/interactive media industry. Prerequisites: MRT 382 and permission of the program director. 3 credits. The internship can be taken either in the last semester, in the summer between junior and senior years, or full-time in the last semester for 12 credits. A full-time internship, if all other coursework is completed, allows students to relocate for the term. If a full-time internship is chosen, then *Interactive Media Production* will be waived.

500. Independent Study. 1–3 credit(s).

Faculty

Johannes M. Dietrich, assistant professor of music.

D.M.A., University of Cincinnati College—Conservatory of Music.

Dietrich teaches violin, viola, the string methods courses, and the music history sequence. He directs the Lebanon Valley College Symphony Orchestra, coaches chamber ensembles and performs solo recitals.

Scott H. Eggert, professor of music.

D.M.A., University of Kansas.

Eggert teaches music theory, composition, music history, class and applied piano. He is active as a composer and has premiered major works on and off campus.

Robert H. Hearson, associate professor of music.

Ed.D., University of Illinois.

A low brass specialist, Hearson directs the bands, teaches courses in instrumental music education and brass pedagogy, and supervises music student teaching activities. He is founder/director of the LVC Summer Music Camp and host conductor/coordinator of the LVC Honors Band. He maintains a special interest in brass ensemble music, and is active as a performer, clinician, adjudicator, and guest conductor.

Barry R. Hill, assistant professor of music.

M.M., New York University.

Hill is the director of the music recording technology program. A member of the National Academy of Recording Arts and Sciences, he has a significant background of experience including record production, interactive media, MIDI/electronic music, live reinforcement, and studio/system design. He teaches music technology courses, supervises development of the on-campus studios, and administers the internship program.

Mary L. Lemons, assistant professor of music.

Ed.D., University of Illinois at Urbana-Champaign.

Coordinator of music education, she teaches music education methods courses, arranges and supervises music student teaching, and advises the campus MENC student chapter.

Mark L. Mecham, professor of music. Chairperson.

D.M.A., University of Illinois at Urbana-Champaign.

His doctorate is in choral music, and he has experience in choral conducting, music education, and voice. Conductor of the LVC Concert Choir and Chamber Choir, Mecham also serves as adjudicator, clinician, and consultant.

Shelly Moorman-Stahlman, assistant professor of music.

D.M.A., University of Iowa.

Moorman-Stahlman teaches private organ and piano lessons, organ literature, organ pedagogy, and sacred music courses, and coordinates class piano instruction. She directs the handbell choir, and performs frequently in solo organ recitals.

Philip G. Morgan, associate professor of music.

M.S., Pittsburg State University (Kansas).

Morgan teaches applied voice with specialization in vocal technique, vocal pedagogy and vocal literature. He performs frequently in solo recitals, oratorios, and chamber recitals in the United States and Europe. He serves as vocal coach for Hershey Park's summer shows.

Jeff Snyder, instructor in music.

B.A., University of West Florida.

Snyder is assistant director of the music recording technology program. He has designed curricula and presented seminars in audio recording and MIDI for several artists, public schools, colleges, universities, and technical schools. He has produced, engineered, and been a session player on 20th century and commercial jingles, songs, and recordings.

Thomas M. Strohman, instructor in music.

B.S., Lebanon Valley College.

He is responsible for woodwind studies, jazz studies, and directs the jazz ensembles. A founding member of the jazz ensemble "Third Stream," he has recorded for Columbia Artists.

Dennis W. Sweigart, professor of music.

D.M.A., University of Iowa.

Sweigart teaches applied piano and courses in keyboard harmony, form and analysis and piano pedagogy. He regularly performs as a soloist and as an accompanist.

Susan Szydlowski, director of special music programs.

B.A., Colby College.

She has pursued graduate studies at Temple University.

Teresa R. Bowers, adjunct assistant professor of music.

M.M., Ohio State University.

Bowers teaches applied flute, double reeds, flute pedagogy, and conducts the flute ensemble. She is a member of Duo Francais, a flute-harp duo, and appears as a recitalist and clinician.

Erwin P. Chandler, adjunct assistant professor of music.

M.M., Indiana University.

He teaches applied horn and is active as a composer/arranger and conductor.

James A. Erdman II, adjunct instructor in music.

Retired solo trombonist, "The Presidents Own" United States Marine Band, Washington, D.C. He teaches low brass instruments and is founder and director of the LVC Low Brass Ensemble. He performs on the trombone and appears nationally as a soloist and clinician.

Timothy M. Erdman, adjunct instructor in music.

B.S., Temple University.

Formerly trumpet soloist, "The President's Own" United States Marine Band, Washington, D.C.; Erdman has been principal trumpet with the Harrisburg and Reading Symphonies. Instructor of applied trumpet, he is a member of "Basic'ly Brass," a professional brass quintet.

Scott Fredrickson, adjunct associate professor of music.

D.A., University of Northern Colorado.

Director of the Music Business Program at University of Massachusetts-Lowell, Fredrickson teaches the music industry courses for the music technology program at LVC. He has extensive experience in the music industry as composer, producer, musician, and clinician. He has authored two textbooks on scat singing and show choir methods, and is President of Scott Music Publications, a music publishing company.

Nevelyn J. Knisley, adjunct associate professor of music.

M.F.A., Ohio University.

Knisley performs extensively as a piano soloist, accompanist and chamber music performer. She serves as faculty adviser to Sigma Alpha Iota, the women's music fraternity.

James E. Miller, adjunct instructor in music.

A member of the jazz ensemble "Third Stream," his teaching specialty is string bass and electric bass. He has played with several regional symphonies in the area.

Joseph D. Mixon, adjunct assistant professor of music.

M.M., Combs College of Music.

He is a professional guitarist in the tri-state area and teaches private lessons and class guitar.

Robert A. Nowak, adjunct assistant professor of music.

M.M., University of Miami.

He teaches percussion and directs the Percussion Ensemble.

Laurie Haines Reese, adjunct assistant professor of music.

M.M., University of Southern California.

An active recitalist, chamber music performer, and member of the York Symphony Orchestra, she teaches private cello lessons, and the Introduction to Music course.

Victoria Rose, adjunct assistant professor of music.

M.M., Towson State University.

Teaching class voice and private lessons, she is an active recitalist and oratorio soloist in Central Pennsylvania, Philadelphia and Baltimore.

Robert Siemers, adjunct assistant professor of music.

D.M.A., Indiana University.

He teaches applied piano and is an active performer in the region.

David Still, adjunct instructor in music.

B.S., The Pennsylvania State University

He is an environmental acoustics engineer specializing in structural acoustics, roadway projects, etc. Still has a long track record as recording engineer, studio and facility designer, and producer, including Grammy-winning projects for Muddy Waters. He teaches the musical acoustics and audio electronics classes for the music technology program.

PHYSICAL EDUCATION PROGRAM

Although the college does not offer a major in physical education, two units of physical education are required for graduation. The program encourages attitudes and habits of good health, while developing physical capacities and skills that will enrich life.

Courses in Physical Education (PED):

102. Aerobic Exercises. A combination of exercise and dance steps in rhythmic movements. The course promotes the value of a total fitness program, including diet and weight control and heart rate monitoring.

113. Bowling. Instruction in the techniques, etiquette, history and method of scoring. About eight weeks will be spent in league play.

122. Fitness. Examination of varied programs for fitness, with emphasis on diet and weight control, cardiovascular efficiency, strength improvement, and flexibility training.

125. Golf. Instruction in the techniques, tactics, rules and etiquette of golf.

135. Racquetball. Instruction in the tactics, techniques and different forms of competition used in racquetball.

146. Tennis. Instruction in the techniques, rules and tactics, with extensive practice in singles and doubles.

160. Swimming. Beginning, intermediate and advanced instruction.

162. Water Exercise. Includes water-walking, water running and other aerobic water exercises for swimmers and non-swimmers. Utilizes water as resistance to improve strength and cardiovascular endurance.

167. Scuba. Instruction by certified dive shop. Learn to use the equipment in sports center pool and then go to various sites for dives.

168. Life Guarding. The primary purpose of the American Red Cross Lifeguarding program is to provide lifeguard candidates and lifeguards with the skills and knowledge necessary to keep the patrons of aquatic facilities safe in and around the water. After successfully completing the requirements of the course, students will be certified in:

Lifeguarding (3 year certification)

First Aid (3 year certification)

CPR for the Professional Rescuer (1 year certification)

169. Water Safety Instructor. This course is designed to provide students with the skills, knowledge, and experience needed to become certified to teach the following Red Cross Swimming and Water Safety courses:

Infant and Preschool Aquatics Program (IPAP)
Levels 1 through 7 Learn to Swim Progression
Basic Water Safety
Emergency Water Safety
Water Safety Instructor Aide

170. Skiing. Beginning, intermediate and advanced instruction at Blue Marsh Ski Area.

180. Team Sports. Softball, volleyball and basketball, four to five weeks of each, emphasizing team concepts.

190. Varsity Sports. Participation in an intercollegiate varsity sport or cheerleading.

Students shall complete successfully two units of physical education selected from a list of approved activities. Students shall not satisfy the physical education requirement by taking the same activity unit twice. Students shall have a maximum of one physical education unit waived for successful completion of any of the following: one season of a varsity sport, one semester of marching band, or one semester of military science (Army ROTC Cadets only). Students must sign up for the varsity sport course during the semester of their sport or activity.

Faculty

O. Kent Reed, associate professor of physical education. Program director.

M.A. in Ed., Eastern Kentucky University.

He instructs the fitness and weight training classes and utilizes body fat percentages, pulse rate and recovery, strength testing devices and workout charts. He also instructs team activities such as softball and volleyball. Responsibilities in the athletic program are track and field and cross country.



Students discuss an assignment prior to class.

DEPARTMENT OF PHYSICS

Physics Program

Physics, the most fundamental science of the physical world, combines the excitement of experimental discovery and the beauty of mathematics. The program in physics at Lebanon Valley College is designed to develop an understanding of the fundamental laws dealing with motion, force, energy, heat, light, electricity and magnetism, atomic and nuclear structure, and the properties of matter.

Students major in physics as a preparation for professional careers in industry as physicists and engineers, and education as high school and college teachers. Other possibilities include technical writing, sales and marketing. Physics students can continue their professional training by going to graduate school in physics and engineering, or to other professional schools offering degrees in such fields as health physics and business.

The facilities of the Physics Department are located on the fourth floor of the Garber Science Center. In addition to the introductory physics laboratory, the department maintains an x-ray laboratory, optics laboratory, atomic physics laboratory, electronics laboratory, and nuclear physics laboratory. Students majoring in physics also have the opportunity to use equipment (e.g., electron microscope, mass spectrometer, nuclear magnetic resonance spectrometer) maintained by other science departments.

Students majoring in physics take advantage of close contact with faculty, work as paid laboratory assistants, pursue independent study or research, and participate in the local chapter of the Society of Physics Students. Summer research opportunities, supported by college funds or external grants, are available for physics students.

Students majoring in physics also have a unique opportunity for study abroad. A student can spend a semester, typically in the senior year, as a physics student at Lancaster University in England. This opportunity combines a continuing education in physics with the richness of an international experience.

The Physics Department also directs the “3+2” Engineering program. For details see Cooperative Programs, page 23.

Degree Requirements:

Degree: Bachelor of Science with a major in physics.

Major: PHY 111, 112, 211, 311, 312, 321, 322, 327, 328 and four additional semester hours above 211; MAS 161, 162, 261 and 266 or MAS 111, 112, 261 and 266. (42–46 credits)

Minor: PHY 111, 112 (or 103, 104), 211, plus six credits in physics above 211; MAS 111 or 161. (21–23 credits)

Secondary Teacher Certification: Along with the major requirements, students seeking secondary certification in physics must take additional courses in education and the sciences. Contact the department for the courses required. (33 credits)

Courses in Physics (PHY):

100. Physics and Its Impact. A course that acquaints the student with some of the important concepts of physics, both classical and modern, and with the scientific method, its nature and its limitations. The role of physics in the history of thought and its relationships to other disciplines and to society and government are considered. The weekly two-hour laboratory period provides experience in the acquisition, representation, and analysis of experimental data, and demonstration of the physical phenomena with which the course deals. 4 credits.

103, 104. General College Physics I,II. An introduction to the fundamental concepts and laws of the various branches of physics, including mechanics, heat, sound, electricity, magnetism, optics, and atomic and nuclear structure, with laboratory work in each area. 4 credits per semester.

111, 112. Principles of Physics I, II. An introductory course in classical physics, designed for students who desire a rigorous mathematical approach to college physics. Calculus is used throughout. The first semester is devoted to mechanics and heat, and the second semester to electricity, magnetism, and optics, with laboratory work in each area. Prerequisite or corequisite: MAS 111 or 161. 4 credits per semester.

203. Musical Acoustics. The study of wave motion, analysis, and synthesis of waves and signals, physical characteristics of musical sounds, musical instruments, the acoustical properties of rooms and studio design principles. Prerequisite: PHY 103 or 112 or permission. 3 credits.

211. Atomic and Nuclear Physics. An introduction to modern physics, including the foundation of atomic physics, quantum theory of radiation, the atomic nucleus, radioactivity, and nuclear reactions, with laboratory work in each area. Prerequisite: PHY 104 or 112, MAS 111 or 161, or permission. 4 credits.

212. Introduction to Electronics. The physics of electrons and electronic devices, including diodes, transistors, power supplies, amplifiers, oscillators, switching circuits, and integrated circuits, with laboratory work in each area. Prerequisite: PHY 104 or 112, or permission. 4 credits.

302. Optics. A study of the physics of light, with emphasis on the mathematics of wave motion and the interference, diffraction and polarization of electromagnetic waves. The course also includes geometric optics with applications to thick lens, lens systems, and fiber optics. Prerequisites: PHY 112 and MAS 112. 3 credits.

304. Thermodynamics. A study of the physics of heat, with emphasis on the first and second laws of thermodynamics. Applications of thermodynamics to physics and engineering are included. Elements of kinetic theory and statistical physics are developed. Prerequisites: PHY 112 and MAS 112. 3 credits.

311, 312. Analytical Mechanics I, II. A rigorous study of classical mechanics, including the motion of a single particle, the motion of a system of particles, and the motion of a rigid body. Damped and forced harmonic motion, the central force problem, the Euler description of rigid body motion, and the Lagrange generalization of Newtonian mechanics are among the topics treated. Prerequisites: PHY 111 and MAS 266. 3 credits per semester.

321, 322. Electricity and Magnetism I, II. Theory of the basic phenomena of electromagnetism together with the application of fundamental principles of the solving of problems. The electric and magnetic properties of matter, direct current circuits, alternating current circuits, the Maxwell field equations, and the propagation of electromagnetic waves are among the topics treated. Prerequisites: PHY 112 and MAS 266. 3 credits per semester.

327, 328. Experimental Physics I, II. Experimental work selected from the area of mechanics, AC and DC electrical measurements, optics, atomic physics, and nuclear physics, with emphasis on experimental design, measuring techniques, and analysis of data. Prerequisite: PHY 211. 1 credit per semester.

350. Audio Electronics. A study of electronics as used in the audio and telecommunications industries. Various principles of signals including frequency, bandwidth, modulation, and transmission are discussed. Studio maintenance and repair techniques are emphasized. Laboratory work included. Prerequisite: PHY 212. 3 credits.

360. The Teaching of Physics in Secondary Schools. A course designed to acquaint the student with some of the special methods, programs, and problems in the teaching of physics in secondary schools. Required for secondary certification in physics. 1 credit.

421, 422. Quantum Mechanics I, II. A study of selected topics in modern physics, utilizing the methods of quantum mechanics. The Schrodinger equation is solved for such systems as potential barriers, potential wells, the linear oscillator, and the hydrogen atom. Perturbation techniques and the operator formalism of quantum mechanics are introduced where appropriate. Prerequisites: PHY 211 and MAS 266, or permission. 3 credits per semester.

Faculty

Michael A. Day, professor of physics. Chairperson.

Ph.D., University of Nebraska.

He has two doctorates: one in physics, one in philosophy. His publications are in theoretical physics (specializing in anharmonic solids), the philosophy of science and the teaching of physics. Day also worked for Shell Oil as a geophysicist.

Barry L. Hurst, associate professor of physics.

Ph.D., University of Delaware.

His background in sputtering involves investigating the material ejected from ion bombarded surfaces using the technique of secondary ion mass spectrometry. Other interests include electronics and experimental design.

J. Robert O'Donnell, professor *emeritus* of physics.

M.S., University of Delaware.

He is interested in the physics of music, including the acoustical properties of the guitar.

Jacob L. Rhodes, professor *emeritus* of physics.

Ph.D., University of Pennsylvania.

His background is nuclear physics with interests in the relationship of physics and society.

William Robert Miller Jr., adjunct professor of physics.

Ph.D., University of Delaware.

His background is experimental solid state physics with interests in mathematical methods in physics.

Arlen J. Greiner, adjunct instructor in physics.

M.S., Franklin and Marshall College.

Having been an engineer for RCA and GE for over 25 years, his background includes physics and engineering with a specialization in electronics.



Professor Day works with students on measuring the charge-to-mass ratio of electrons.

DEPARTMENT OF POLITICAL SCIENCE AND ECONOMICS

Political Science Program

Political scientists study government institutions and the political systems related to them. Students who major in political science take courses to give them a thorough understanding of the American political system, the political systems of other nations, and international politics. One half of the 36 credits in this major must be taken in core requirements and the other half consist of elective credits chosen by the student. Political science majors have gone on to careers in law, politics, high school teaching, and government service.

The political science major is closely related to the pre-law and criminal justice programs. Several political science courses are required for each of them.

Degree Requirements:

Degree: Bachelor of Arts with a major in political science.

Major: PSC 111, 112, 130, 210, 220, 350 and six additional elective courses in political science (36 credits).

Minor: PSC 111, 112, 130, 210, 220, and one additional elective course in political science (18 credits).

Courses in Political Science (PSC):

111. American National Government I. In this course, we discuss the ideas that shaped the original American political system and the ways these ideas have developed. In addition, we examine important civil rights questions relating to freedom of speech, the press, and religion. The course also explores contemporary debates over equal rights (affirmative action) and privacy rights (abortion and sexual orientation). Finally, we look at the operations of interest groups and political parties and the processes by which candidates get elected to office. 3 credits.

112. American National Government II. In this course, we discuss the functions of the Presidency, the Congress, and the federal courts. With this material learned, we examine various domestic, defense, and foreign policy-making questions including debates over balancing the budget, welfare reform, defense strategies, and U.S. relations with other nations. The course also includes an examination of state and local government. 3 credits.

130. International Relations. The study of international relations focuses on a series of questions: Who are the principal actors in the international system? How has the international system evolved into its present form? What are the central issues confronting the international system? And, finally, what appears to be the prospects for a humane, peaceful international order? 3 credits.

140. Modern Asia. This course examines modern Asia, a region that has undergone a remarkable economic modernization and now stands as one of the world's great centers of wealth and power. The course traces Asia's 19th century enslavement to imperialism and colonialism, followed by its tragic descent into war in the first half of the 20th century. The bulk of the course traces the meteoric rise of Asia in the late 20th century. Industrialization,

modernization, and democratization are the themes of much of the course. 3 credits.

150. Modern Middle East. A broadly interdisciplinary survey of the development of the modern Middle East. The region's diverse social, cultural, political, and economic characteristics are examined and particular attention given to the complex relationship between the Middle East and the west. 3 credits.

210. Comparative Government. This course is a comparative study of important political systems of the world. Methods of comparing government are also treated. Countries surveyed are Great Britain, Germany, France, Russia, Japan, China, and two or three countries from the developing world. 3 credits.

211. The Developing Nations. A survey of the developing nations of Latin America, Asia, Africa, and the Middle East. The political economy of development, in both its domestic and international dimensions is emphasized. Country studies will include Nigeria, Mexico and the Philippines. 3 credits.

216. Quantitative Methods in Behavioral Science. Evaluation of behavioral research emphasizing the descriptive and inferential statistics used in experiments and correlational studies. Prerequisite or corequisite: PSY 100 or 120. 3 credits. {Cross-listed as Psychology 216.}

220. Political Philosophy. This course investigates how thinking about politics has developed from the time of the Greeks in 5th century Athens down to the late 20th century. The course uses the central questions of politics (Why obey? Who should rule?) as the focus for examining Western political thinking. 3 credits.

250. Public Policy Analysis. This course gives students an understanding of the public policy process and of policy analysis at the national level of government. The course includes theories of policy-making as well as an examination of such substantive policy areas as foreign, defense, subsidy, and redistributive policies. Prerequisites: PSC 111 and 112, or permission of the instructor. 3 credits.

260. The President and Congress. This course will examine the Presidency and Congress as institutions and as policy-making agencies of the government. It will focus on the necessary interactions between these two branches of the government. Prerequisites: PSC 111 and 112 or permission of the instructor. 3 credits.

312. American Foreign Policy. A survey of the foreign policy of the United States. emphasizing the post-World War II era. Topics covered include the policymaking process, especially the ongoing struggle between the President and the Congress over the power to make foreign policy, the evolution of American foreign policy since World War II, and the principal issues confronting the nation since the end of the Cold War. 3 credits.

315. American Constitutional Law I. Constitutional law and interpretation and the powers of government. Topics include judicial review, national supremacy, private property, contracts, commerce powers, equal rights, and civil liberties. PSC 111 and 112 strongly recommended. 3 credits.

316. American Constitutional Law II. Constitutional law and interpretation and the Bill of Rights. Emphasis is given to civil liberties, equal rights, and rights of the accused. PSC 111 and 112 strongly recommended. 3 credits.

320. Electoral Politics. The dynamics of the electoral process, with emphasis on presidential and congressional elections and the role of parties, public opinion, and interest groups. 3 credits.

330. State and Local Government. Governmental institutions, characteristics of state and local political systems and the major inter-governmental problems in state and local relations with the federal government. 3 credits.

350. Seminar in Politics. This seminar allows junior and senior political science majors to pursue a research interest within a broad topic area prescribed for each semester the seminar is given. Students will present their work at an undergraduate research conference. Prerequisites: major in political science and junior or senior standing. 3 credits.

415. Foundations of American Law. An historical survey of American legal development from colonial times to the present. The course is a supplement to Constitutional Law. Strongly recommended for pre-law students. Prerequisite: PSC 112. 3 credits.

420. Seminar in World Politics. A consideration of significant theories of international relations and their applicability to such selected contemporary issues as superpower relations, conflict resolution, development of the poor nations, and economic interdependence. Prerequisites: PSC 130, or permission of the instructor. 3 credits.

Economics Program

Economics is the science of the choices forced on us by a world of resources that have competing uses. The traditional major in economics deals with decisions and choices made by individuals and firms and with the macroeconomic consequences of those choices. In addition to this traditional major, the department offers a major in public policy economics which emphasizes the application of economic methodology and analytical tools to the choices made by groups such as firms, families and political units. This major includes courses in political science and a government-service oriented internship.

Degree Requirements:

Degrees: Bachelor of Arts with a major in economics.

Major: (Economics) ECN 101, 102, 201, 202, 312, and four additional elective courses in economics; ACT 161; MAS 335, MAS 150 or 161 or 111; MAS 170 or 270 or 372 (36 credits).

Major: (Economics: Public Policy Concentration) ECN 101, 102, 201, 202, 250, 321, 400, 410, and 315 or 316; PSC 111, 112 and 250; ACT 161, MAS 150, MAS 170 or 270 or 372 (48 credits).

Minor: (Economics) ECN 101, 102, 201, 202, 312; and one additional economics elective course (18 credits).

Courses in Economics (ECN):

100. Public Issue Economics. This course, for the non-major, covers public policy issues from the viewpoint of the economist. It looks at how individuals and also groups like corporations and governments make decisions about how resources are used. Issues covered remain current but may include welfare, poverty, crime, the environment, race and gender in microeconomics and unemployment, the debt and deficit, inflation and growth at the macroeconomic level. 3 credits. (Students having completed ECN 101 and/or 102 may not receive credit for ECN 100.)

101. Principles of Microeconomics. The course examines how individuals and firms make choices within the institution of free-market capitalism. Individuals decide how much of their time to spend working and what to buy with the earnings of their labor. Firms decide how much to produce and in some cases what price to charge for their goods. Together these choices determine what is produced, how it is produced and for whom it is produced in our economic system. 3 credits.

102. Principles of Macroeconomics. This course extends the study of consumer and producer choices to discover how they affect the nation's economy. Macroeconomics deals with the economy as a whole as measured by the key variables of inflation, unemployment, and economic growth. Emphasis is on both Keynesian and classical theories and how they predict what monetary and fiscal policies can be used to affect these variables and reach national economic goals. Prerequisite: ECN 101. 3 credits.

201. Intermediate Microeconomic Analysis. This course covers the major theories of mainstream neoclassical economics. There is intensive study of the models of consumer and firm behavior that permit understanding of how the prices and quantities of goods and services are determined in a free market capitalistic system. The implications for social welfare, and equity and efficiency issues that are inherent in the free-market system are emphasized. Prerequisites: ECN 101 and 102. 3 credits.

202. Intermediate Macroeconomic Analysis. In this course, students develop a model of the macroeconomy which permits them to analyze the nature of the business cycle. The assumptions built into the model can be altered, rendering it capable of examining the macroeconomy from various theoretical viewpoints. In addition to unemployment, inflation and economic growth, the course covers real business cycles, the macroeconomic implications of free trade and emphasizes the microeconomic foundations of macroeconomics. Prerequisites: ECN 101 and 102. 3 credits.

250. Public Choice Economics. This course is the foundation course for the curriculum in Public Policy. It concerns itself with how individuals and groups make decisions in the context of the family, interest groups, bureaucracies and the government. It goes beyond individual choice and private markets to group interests and activities. It emphasizes the

ethical and political nature of all economic choices. Prerequisites: ECN 101 and 102. 3 credits.

312. Money and Banking. The study of the nature and functions of money and credit, including the development and role of commercial and central banking, structures of the Federal Reserve System, and monetary and banking theory, policy and practice. The course considers the political nature of money and the tension between fiscal and monetary policy making. Prerequisites: ECN 101 and 102. 3 credits.

315. Health Economics. This course uses the concepts of micro and macro economic theory to examine how health care is produced, delivered and financed. The tension between efficiency and equity that pervades the free market system will be a focal point. Topics such as the pricing of medical care, insurance and moral hazard, ethical problems of quality versus quantity control, and the political nature of policy decisions are examined. Prerequisites: ECN 101 and 102. 3 credits.

316. Ecological Economics. Ecological economics stresses the co-evolution of human preferences, understanding, technology and cultural organization. This approach differs from that of conventional economics and conventional ecology in the importance it attaches to environment-economy interactions. The role that our economic system plays in decisions affecting the sustainability of our ecosystems is emphasized. Prerequisites: ECN 101 and 102. 3 credits.

321. Public Finance. This course extends the study of public economics to its application in the principles of taxation and public expenditures. Topics include the structure of the Federal Budget, the national debt and fiscal deficits, but also state and local financing and the division of responsibilities between the federal and local governments. Prerequisites: ECN 101 and 102. 3 credits.

332. International Economics. This course introduces the theory and practice of international economic relations. It includes, not only the history and purpose of trade and the traditional theory of the gains from trade, but also the more modern theory of trade with imperfect competition. The history and nature of the institutional structures of trade (World Trade Organization) and international finance (International Monetary Fund) are covered. Prerequisites: ECN 101 and 102. 3 credits.

410. Senior Seminar. This course begins with an introduction to econometrics; each student will complete a research project that includes data analysis using a statistical computer program and retrieving data from the Internet. Students will also read and critique articles from referred economic journals and from the popular press. Prerequisites: ECN 101, 102, 201, 202 and either 250 or permission of the instructor. 3 credits.

Criminal Justice Program

For students interested in the field of criminal justice (including police work, counseling juvenile offenders, court assistants, probation work, and other areas), the courses listed below

constitute the criminal justice program. The chairs of the Sociology and Social Work and the Political Science and Economics Departments function as advisers for this program. Interested students should consult with one of these advisers.

Degree Requirements:

There is no major or minor in criminal justice, but the program can be most easily combined with a major in political science or sociology. However, the program is not confined to majors in these areas.

The courses required are as follows: PSC 112,315,316,415; SOC 110,331,333; one of the following: SOC 278, SOC 271, SOC 272; six credits of PSC, PSY, SOC, or SWK 400. (30 credits.)

Faculty

D. Eugene Brown, professor of political science.

Ph.D., State University of New York at Binghamton.

He teaches international studies, with a particular emphasis on Asia. He has authored or coauthored four books on international affairs and a number of papers, articles, monographs, and book chapters on Japanese foreign policy. He was Visiting Professor of Foreign Policy at the U.S. Army War College from 1989-1991 and was the Visiting Professor of International Affairs at Nanjing University in China from 1995-1996.

Paul A. Heise, associate professor of economics.

Ph.D., New School for Social Research.

His chief areas of interest are public policy and the history of economic thought. He has served in several positions in the U.S. Department of State and the Executive Office of the President. He has published in the United States and abroad on labor and multinational corporations and on the philosophy of Adam Smith.

Jeanne C. Hey, associate professor of economics. Chairperson.

Ph.D., Lehigh University.

She specializes in economic theory and environmental and health economics. Her chief interests are in the application of economic principles to the study of social issues. Her professional focus is on the economic analyses of state and local public policy issues.

John D. Norton, professor of political science.

Ph.D., American University.

He teaches courses in American government, constitutional law, political theory and American politics. He is the pre-law adviser for the college. His professional and research interests are in the areas of American Constitutionalism, history of political thought and political rhetoric.

DEPARTMENT OF PSYCHOLOGY

Psychology Program

The goal of psychology is the scientific description and explanation of behavior. This goal is approached in diverse ways: from laboratory experiments on animal behavior at one extreme, to clinical interventions having therapeutic behavioral objectives at the other. This diversity makes psychology important to fields such as business, education, and medicine, and makes it an integral part of any liberal arts education.

The undergraduate major in psychology incorporates many aspects of psychology. It includes elements of a general education as well as elements specially tailored to each student's career training. Some students completing the major have gone on to prestigious graduate schools while others have utilized their undergraduate training to take jobs immediately upon graduation. The departmental degree requirements are sensitive to this career diversity.

Degree Requirements:

The courses required of all psychology majors include: The Individual and Society (PSY 100), General Psychology (PSY 110), Experimental Psychology (PSY 210), Psychological Statistics (PSY 216), Sophomore Seminar (PSY 299), and the History of Psychology (PSY 443). These courses provide a firm foundation for specialization in any of the content areas of psychology.

The student majoring in psychology is also expected to focus in one of four content areas:

- (1) clinical and counseling psychology
- (2) experimental psychology
- (3) developmental and school psychology
- (4) industrial/organizational psychology

The three required courses in an area of specialization are intended to link the liberal arts background to specific career goals.

In addition to these general and specialized courses, all psychology majors are encouraged to participate in the educational process beyond the classroom through independent studies, laboratory research, and internships. The department is committed to providing opportunities for work experiences as a component of the psychology major.

Degree: Bachelor of Arts with a major in psychology.

Major: PSY 100, 110, 210, 216, 299, 443; one course from: 335, 355, 356, 358; one course from 321, 332, 343, 346; and three additional courses from a single specialty area (32 credits). For a concentration in clinical/counseling psychology, the additional courses should be from 332, 335, 343, 359, 431, 432. For a concentration in experimental/physiological psychology, the additional courses should be from 335, 346, 355, 356, 358, 359. For a concentration in organizational/industrial psychology, the additional courses should be from 160, 332, 335, 337, 346, 359. For a concentration in developmental/school psychology, the additional courses should be from 160, 220, 321, 322, 326, 332, 343, 346, 359.

Minor: PSY 100, 110, 210, 216 and three elective courses in psychology (22 credits). For an emphasis in clinical/counseling psychology, the electives should be from 332, 335, 343, 358, 431, 432. For an emphasis in experimental/physiological psychology, two of the electives should be from 335, 355, 356, 358. For an emphasis in organizational/industrial psychology, two of the electives should be from 160, 332, 337, 346. For an emphasis in developmental/school psychology, two of the electives should be from 220, 321, 322, 332, 346.

Courses in Psychology (PSY):

100. Psychology: The Individual and Society. An introduction to psychology as a social science. Covers the interactions of the individual and society that influence development, learning, motivation, sexuality, and identity, as well as social and emotional adjustment. 3 credits.

110. General Psychology. A survey course examining the relationship between research and theory in the field of psychology. The course is intended to give the student an overview of all areas of specialization within psychology. 3 credits.

160. Career Counseling. The course surveys assessment of skills and competencies, occupational research, decision-making, and job search strategies. Students are encouraged to apply the theories of career counseling to their own vocational decisions and goals. Prerequisite: PSY 100, 110, 210 or permission. 3 credits.

210. Introduction to Experimental Psychology. Focuses on psychology as a science. It emphasizes laboratory research, and covers topics relevant to scientific research, and science in general (e.g.. research design, experimental methods, data analysis and interpretation, and scientific ethics). Topics of experimental psychology (eg. sensory and perceptual processes, learning and memory, psychological testing, and social behaviors) are discussed. 4 credits.

216. Quantitative Methods in Behavioral Science. Evaluation of behavioral research emphasizing the descriptive and inferential statistics used in experimental research and correlational studies. Prerequisite or corequisite: PSY 100, 110, or 210. 3 credits. {Cross-listed as Political Science 216.}

220. Educational Psychology. Studies of cognitive, behavioral, emotional and social processes in the school; required for certification in elementary and music education. Prerequisite: PSY 100, 110 or 210. 3 credits.

299. Sophomore Seminar. This course is designed to assist psychology majors in developing skills to be more successful in future academic and work settings. Subjects include current research in psychology and related fields, how to improve writing skills, how to prepare for a career in psychology, how to apply to a graduate program, how to study for the GRE, and how to choose internships sites. 1 credit. This will be a pass/fail course for all students.

321. Psychology of Child Development. A study of the patterns of cognitive, social and emotional developmental changes occurring during childhood. Special attention is given to research studies, developmental mechanisms and theories of development. Prerequisite: PSY 100, 110 or 210. 3 credits.

322. Psychology of Adolescent Development. A study of the psychological characteristics and changes occurring during adolescence. Topics include psychological development, social influences, cognitive and intellectual development, emotional development, identity and self-concept, sexual development, values, and transition to adulthood. Prerequisite: PSY 100, 110, 210 or 216. 3 credits.

326. Psychology of Adult Development. A study of research literature and theories concerned with psychological change in the adult, from late adolescence to death. Includes the works of such theorists as Maslow and Erikson. Prerequisite: PSY 100, 110, 210 or 216. 3 credits.

332. Psychological Testing and Assessment. Introduction to the principles of psychological measurement, methods of test design and construction, and applications and interpretations of existing psychological tests. Prerequisite: PSY 100, 110, or 210. 3 credits.

335. Research Design and Statistics. A survey of experimental designs utilized in psychological investigations. Includes factorial experiments, field studies, correlative designs and multivariate techniques. Readings are selected from current research in clinical, educational, organizational, and laboratory settings. Prerequisites: PSY 210, 216 or permission. 3 credits.

337. Organizational Psychology. A study of psychological principles as applied to problems of organizational behavior, with emphasis on personnel selection, human engineering, group dynamics, systems design, training, leadership, and performance evaluation. Prerequisite: PSY 100, 110 or 210. 3 credits.

343. Personality. A study of the major theories of personality, emphasizing psychoanalysis, humanistic psychology, behaviorism, social learning, and trait theory. Prerequisite: PSY 100, 110 or 210; junior or senior standing, or permission. 3 credits.

346. Social Psychology. A study of the inter- and intra-personal relationships between individuals and groups, with emphasis on theories and research studies. The topics covered may include attitude development and change, conformity, persuasion, person perception, attribution, attraction, and group processes. Prerequisites: PSY 100, 110 or 210; junior or senior standing, or permission. 3 credits.

350. Drugs and Behavior. This survey course is designed to familiarize students with the physiological, psychological, social and legal aspects of various drugs including alcohol, marijuana, caffeine, over-the-counter drugs, cocaine, heroin and the opiates, LSD and other hallucinogens, barbiturates and amphetamines. 3 credits

355. Learning and Memory. This course surveys psychological research on learning and memory. Topics include classical and instrumental conditioning, verbal learning, problem solving, basic memory processes, and models of learning and memory. Prerequisite: PSY 100, 110, 210 or permission. 3 credits.

356. Sensory and Perceptual Processes. This course focuses on the structures and functions of sensory systems. It includes the study of the visual system as a model to delineate information processing strategies in the eye, the optic nerve, and the brain. The course will delineate sensory from perceptual processes. The perception of visual, olfactory, auditory,

gustatory and vestibular and cutaneous information will be discussed from experimental, physiological, and philosophical perspectives. Prerequisite: PSY 100, 110, 210 or permission. One course in biology is recommended. 3 credits.

358. Physiological Psychology. A study of the biological mechanisms underlying behavioral processes. Focuses on the physiology of reflexes, sensation and perception, learning and memory, sleep, and motivation and emotion. The laboratory portion of the course includes sheep brain dissection and behavioral observation. Prerequisite: PSY 100, 110, 210 or permission; completion of a biology course is recommended. 3 credits. {Cross-listed as Psychobiology 358.}

359. Research Practicum. A course designed to provide students with the opportunity to develop a research idea and carry it through to completion, with literature, review proposal, pilot study, data analysis, write-up, and presentation. The aim of the course is to give students practical experience in research so that they have a better appreciation of the nature of the research process. Prerequisites: PSY 210 and 216 or permission of instructor. 3 credits.

385. Health Psychology/Behavioral Medicine. This course is designed as an introduction to health psychology/behavioral medicine. It will consider the role of psychology in the health field, including medical settings. It covers the relationship between psychological factors and physical disease from predisposition through maintenance. The study of behavioral medicine will include treatment of stress and stress-related disorders, preventive health behaviors and factors related to adherence of treatment programs. It also explores the psychological connections of pain and pain management, and how personal control is related to both health and the disease process. 3 credits.

431. Abnormal Behavior and Experience. A study of mental, emotional and behavioral problems, including alcohol and drug abuse, brain disorders, criminal and psychopathic behavior, neuroses, psychophysiological reactions, psychoses, sexual deviations, subnormal intelligence, and suicide. Prerequisites: PSY 100, 110 or 210; junior or senior standing or permission. 3 credits.

432. Introduction to Clinical Psychology. A study of the ways psychologists assist persons and groups. Particular attention is given to assessment, individual and group therapy, marriage and family counseling, and community psychology. Prerequisites: PSY 100, 110 or 210; PSY 431 or some psychiatric experience, or permission. 3 credits.

443. History and Theory. Studies the history of psychology including philosophical concepts, early schools of psychology, important trends, and famous psychologists. Prerequisites: PSY 110; junior or senior standing; or permission. 3 credits.

500. Independent Study. Prerequisite: PSY 359. This will be graded pass/fail only.

Faculty

Salvatore S. Cullari, professor of psychology. Chairperson.
Ph.D., Western Michigan University.

His teaching interests are in clinical and abnormal psychology, personality and social psychology. His current research areas are in schizophrenia and the study of eating disorders.

Deanna L. Dodson, assistant professor of psychology.

Ph.D., University of Memphis.

Her teaching interests are in lifespan development, experimental psychology and research methods. Her current research areas include hemispheric specialization and handedness, and developmental patterns in lateralization.

Kerrie D. Laguna, assistant professor of psychology.

Ph.D. Candidate, University of Nebraska-Lincoln.

Her teaching interests include child and lifespan developmental psychology. Her research interests are in cognition and aging.

Louis Manza, assistant professor of psychology.

Ph.D., City University of New York.

His teaching interests include cognitive psychology, statistics, experimental methodology, and the history of psychology. Research interests focus on implicit learning and memory, cognition and emotion, attention, and the neurological processes underlying thought processes.

Steven M. Specht, associate professor of psychology.

Ph.D., State University of New York at Binghamton.

His teaching interests include statistics and experimental design, as well as a variety of areas in psychobiology. Current research interests are ingestive behaviors, human taste perception and psychobiology.

Martha Brod, adjunct assistant professor of psychology.

Ph.D., Fordham University.

Her interests include counseling psychology and developmental and educational psychology.

Stephanie (Stevie) Falk, adjunct assistant professor of psychology.

Ph.D., Loyola University of Chicago

Her teaching interests are in clinical and counseling psychology. She is in private practice.

Joseph E. Peters, adjunct associate professor of psychology.

Ph.D., The Pennsylvania State University.

Supervises the internship students. His research interests are in clinical psychology and computer applications to patient management. He is a clinical psychologist at a veterans administration hospital.

Beth J. Shaw, adjunct assistant professor of psychology.

Ph.D., University of Rhode Island.

Her teaching areas are developmental and educational psychology. She is a psychologist at Milton Hershey School.

Richard J. Tushup, adjunct assistant professor of psychology.

Ph.D., University of Delaware.

His teaching interests are in experimental psychology, neuropsychology and abnormal psychology. He is a staff psychologist at a veterans administration hospital.

DEPARTMENT OF RELIGION AND PHILOSOPHY

A major in religion or philosophy may be combined with a major or minor in another subject. Many majors go on to advanced study in graduate or professional schools and seminaries. Our graduates have pursued a wide variety of careers in education, law, ministry and business.

Religion Program

The study of religion is designed to give students insight into the meaning of the religious dimension of human experience. Course work in religion introduces students to the various historical and contemporary expressions of the Judeo-Christian heritage as well as to the diverse religious traditions of humankind.

Degree Requirements:

Degree: Bachelor of Arts with a major in religion.

Major: REL 110, 115, 116, 201 or 202, 311, 312, and four additional courses in religion, of which at least one must be in 200-level courses and one in 300-level courses (30 credits).

Minor: REL 110, 115, 116, 201 or 202; and two additional courses in religion, of which at least one must be in 300-level courses. (18 credits).

NOTE: To be credited for majors or minors in religion, cross-listed courses must be designated as religion courses at registration.

Courses in Religion (REL):

110. Introduction to Religion. An exploration of the many dimensions of religion as a central human experience: self and meaning, religious expression, religious knowledge, religion in its cultural context, and religion and the natural order. 3 credits.

115. World Religions I. An introduction to the major religions of African and middle-eastern origin, with emphasis on Judaism, Christianity and Islam. 3 credits.

116. World Religions II. An introduction to the major religions of far-eastern origin with emphasis on the religious traditions of India, China and Japan. 3 credits.

120. Religion in America. A study of the origin and development of religious expression in America. 3 credits.

160. Religion and Ethics. A study of religion in its relation to moral values, both personal and social, with emphasis on Christian ethics. 3 credits.

201. Biblical Literature I. A study of the Hebrew scriptures (known to Christians as the Old Testament) and related literature, including their historical and social context. 3 credits.

202. Biblical Literature II. A study of the New Testament and related literature, including its historical and social context. 3 credits.

230. *Philosophy of Religion.* A study of the issues raised for philosophy by contemporary religious thought. The course examines such topics as faith and reason; faith and culture; and interpretations of revelation, symbolism, and religious language. 3 credits. {Cross-listed as Philosophy 230.}

251. *Judaism.* A survey of the development of Judaism and its contemporary teachings and practices. 3 credits.

253. *Buddhism.* A study of the development of Buddhism, including its teaching, practice and influence as one of the great missionary religions. 3 credits.

260. *The Sacred and Society.* A study of debates concerning the sacred origins of society in China, India, and Western Europe. The course includes claims for divine sanctions for societal structures as well as opposing views. 3 credits.

265. *Myth and Metamorphoses.* A study of God in a variety of cultures, including India, Egypt, and Greece at periods when writers were adapting mythic traditions and formulating less poetic, more literally minded views of the divine. The course also explores a variety of theoretical approaches to myth. 3 credits.

311. *History of Christianity I.* The story of Christianity from the apostolic age to the Renaissance. 3 credits.

312. *History of Christianity II.* The story of Christianity from the Protestant reformation to the ecumenical era. 3 credits.

322. *Sociology of Religion.* The structures and functions of religious organizations and phenomena with emphasis on the varieties of religious expression in America. 3 credits. {Cross-listed as Sociology 322.}

332. *Religion in Literature.* A study of religious and moral issues in contemporary fiction, poetry and non-fiction. 3 credits.

337. *Creation and Cosmos.* A study of religious and scientific theories of the origins of the cosmos from the Presocratics through contemporary cosmologists. The course examines developments of scientific theories of the cosmos in ancient Greece, the adaptation of those theories in the medieval church, the critique of ancient and medieval views in the early modern period, and the development of new theories in recent times. 3 credits. {Cross-listed as Philosophy 337.}

342. *Religion, Ethics, and Technology.* An exploration of ethical and religious issues arising from modern science and technology, using process philosophy as a basis. 3 credits. {Cross-listed as Philosophy 342.}

352. God. Views of God as expressed in a variety of contexts from late antiquity to the early modern period, including Christian and Islamic views, as influenced by Platonism. Topics include proofs for the existence of God, arguments concerning God's nature, the limits of reason, and the role of faith in discussing God. 3 credits. {Cross-listed as Philosophy 352.}

Philosophy Program

The study of philosophy directly involves the student in the process of sharpening critical and analytical abilities. Philosophy courses examine some of the greatest perennial questions of values, knowledge, reality and their relation to human nature.

Degree Requirements:

Degree: Bachelor of Arts with a major in philosophy.

Major: PHL 120, 160, 300; at least one course from PHL 301–336; and six additional courses in philosophy (30 credits).

Minor: PHL 160, 300; at least one course from PHL 301–336; nine additional courses in philosophy (18 credits).

Note: To be credited for majors or minors in philosophy, cross-listed courses must be designated as philosophy courses at registration.

Courses in Philosophy (PHL):

110. Introduction to Philosophy. Examination of major philosophical issues and the ways major philosophers have dealt with them. 3 credits.

120. Basic Logic. An introduction to the rules of clear and effective thinking. Attention is given to the logic of meaning, the logic of valid inference, and the logic of factual inquiry. Main emphasis is upon deductive logic. Students are introduced to the elements of symbolic logic as well as to traditional modes of analysis. 3 credits.

160. Ethics. An inquiry into the central problems of values applied to human conduct, with an examination of the responses of major ethical theories to those problems. 3 credits.

215. Social Philosophy. An examination of some of the important philosophical issues, including the ethical and valuational, to be found in the social institutions of politics, law, government, and religion. 3 credits.

220. Political Philosophy. A survey of the different Western philosophies and theories of government, ancient and modern, but especially since the 16th century. 3 credits. {Cross-listed as Political Science 220.}

230. Philosophy of Religion. A study of the issues raised for philosophy by contemporary religious thought. The course examines such topics as faith and reason; faith and culture; and

interpretations of revelation, symbolism and religious language. 3 credits. {Cross-listed as Religion 230.}

240. American Philosophy. A survey of philosophical thought in the United States from colonial period to present, with emphasis on the work of Peirce, James, and Dewey. 3 credits.

251. Chinese Philosophical Traditions. A study of the principal Chinese philosophical traditions, including Confucianism, Taoism, Mohism, and Chinese Buddhism. Key writings are examined together with their historical background. 3 credits.

252. Indian Philosophies. An examination of the major philosophical traditions of India, orthodox and heterodox, as expressed in both literature and practical effects in culture. 3 credits.

260. Business Ethics. An examination of ethics and values within the context of modern corporate organizations. The course considers issues pertinent to corporate responsibility, whistle-blowing, the profit motive, consumerism, bribery, conflict of interest, and cost/benefit analysis. Some attention is given to classical ethical theories; a considerable portion of the course is devoted to case analysis. 3 credits.

300. History of Philosophy. The development of philosophical thought from the pre-Socratics through the 19th century, with emphasis on philosophy as a discipline of systematic inquiry. 3 credits.

301–335. Major Authors. Intensive studies of individual great philosophers or principal schools. Prerequisite: PHL 300 or permission. 3 credits.

336. Twentieth Century Philosophy. Examines representative American, British, and Continental philosophers from 1900 to present.

337. Creation and Cosmos. A study of religious and scientific theories of the origins of the cosmos from the Presocratics through contemporary cosmologists. The course examines developments of scientific theories of the cosmos in ancient Greece, the adaptation of those theories in the medieval church, the critique of ancient and medieval views in the early modern period, and the development of new theories in recent times. 3 credits. {Cross-listed as Religion 337}.

342. Religion, Ethics, and Technology. An exploration of ethical and religious issues arising from modern science and technology, using process philosophy as a basis. 3 credits. {Cross-listed as Religion 342}.

349. The Holocaust: A Case Study in Social Ethics. This course examines the moral responsibility of institutions in German society, 1939–1945, for acquiescing to and perpetrating the state-sanctioned killing of European Jews and others. 3 credits.

352. God. Views of God as expressed in a variety of contexts from late antiquity to the early modern period, including Christian and Islamic views, as influenced by Platonism. Topics include proofs for the existence of God, arguments concerning God's nature, the limits of reason, and the role of faith in discussing God. 3 credits. {Cross-listed as Religion 352}.

Faculty

Eric W. Bain-Selbo, assistant professor of religion and philosophy.

Ph.D., University of Chicago.

He specializes in social ethics and recent continental European philosophy. He has presented conference papers on religion and the family and on teaching religious studies. Interests include Judaism, Asian philosophy and religion, and inter-religious dialogue.

Donald E. Byrne Jr., professor of religion and American studies. Director of American Studies Program.

Ph.D., Duke University.

His scholarship has focused on American folk religion, particularly as expressed in the Methodist and Roman Catholic communities. Other interests include American studies, religion and ethics, religion and literature, peace studies, and mysticism.

John H. Heffner, professor of philosophy. Chairperson.

Ph.D., Boston University.

His teaching interests include logic, philosophy of religion, metaphysics, and history of philosophy. His current interests include science and religion, philosophy of religion, and history of philosophy. He has also published research in philosophy of perception.

J. Noel Hubler, assistant professor of religion and philosophy.

Ph.D., University of Pennsylvania.

His teaching interests include philosophical ethics and major world religions. He specializes in ancient and medieval philosophy and Christianity and has done research in how cosmology is understood by the major world traditions.

Mark E. Achtermann, adjunct assistant professor of philosophy.

M.A., Chicago Theological Seminary.

He teaches introduction to philosophy, Asian philosophy, and world religions. He is interested in comparative, cross-cultural and cross-disciplinary studies.

Robert W. Dell, adjunct assistant professor of religion and philosophy.

Ph.D., Drew University.

He teaches introduction to religion. His interests are in philosophical theology and computer applications in religion and philosophy.

Donald C. Hoepfer, adjunct instructor in philosophy.

M.A., The Pennsylvania State University.

He teaches logic, business ethics, and other courses in philosophy. He specializes in the history of philosophy.

David W. Layman, adjunct assistant professor of religion.

Ph.D., Temple University.

A specialist in the history of American religious thought, he teaches a variety of courses, including world religions, religion in America, and history of Christianity.

Elizabeth A. Rohrbach, adjunct instructor in religion.

M. Div., Princeton Theological Seminary.

She works in counseling and teaches world religions and other introductory courses.

Helen D. Schroepfer, adjunct instructor in religion.

M.A., St. Mary's Seminary and University.

She teaches world religions and other courses. She is a doctoral student at Temple University.

Pamela C. Wallace, adjunct instructor in religion.

M. Div., Lutheran Theological Seminary at Gettysburg.

She teaches courses in religion and is the director of Christian education at Salem Lutheran Church, Lebanon.

SOCIAL STUDIES PROGRAM

The college offers a special program for students seeking certification to teach social studies in the secondary schools. The program includes three required components: the social studies core, the secondary education core, and a major in one of the following disciplines: history, political science, economics, sociology or psychology. Graduation requirements for any of these majors are noted in this catalog under the appropriate department. There is no major in social studies. Dr. Howard L. Applegate is the coordinator of the Social Studies Certification Program.

Program Requirements:

Social Studies core courses: ECN 101, 102; HIS 111, 112, 125, 126, 211; PSC 111, 112, 210; PSY 346; and SOC 110, 120; plus two of the following: PSC 140, 150; HIS 271, 273, 275, 277 or 279 (each student shall take at least one history and one political science course with the understanding that the two courses selected may not be on the same geographical area); plus one of the following: HIS 261, 262 or SOC 362 (48 credits).

Secondary education core courses: EDU 110; HIS 360; SED 420, 430, 440, and highly recommended SED 280 (24-27 credits).

Major courses: history, political science, economics, sociology or psychology. (32-40 credits).



Classes are often held outside on campus.

DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

Sociology Program

The major in sociology gives students an understanding of human behavior. By examining the social and cultural forces that shape our lives, students gain a richer understanding of themselves and contemporary social issues. Sociology explores how and why people behave as they do as well as the effects of their behavior on others. In an economy that is moving from a manufacturing base to a service orientation, graduates in sociology are prepared to work in fields where an understanding of the dynamics of human relationships is important.

Degree Requirements:

Degree: Bachelor of Arts with a major in sociology.

Major: SOC 110, 311, 421, 499; 21 additional credits in sociology excluding internships (33 credits).

Minor: SOC 110, 311, 421; three elective courses in sociology excluding internships (18 credits).

Courses in Sociology (SOC):

110. Introduction to Sociology. A study of the basic sociological perspective including the nature of society, the influence of culture, the development of the self, and group dynamics. Specific topics include deviance and social control, racism, sexism and poverty. 3 credits.

120. Introduction to Anthropology. Introduction to both physical and cultural anthropology including human evolution, human variation, and cross-cultural analysis and comparison. 3 credits.

210. Social Problems. Contemporary social problems as seen through different analytical perspectives. Problems covered include war and peace, pollution and environmental exploitation, crime and delinquency, and emotional and physical illness. Prerequisite: SOC 110 or 120. 3 credits.

211. Urbanology. An analysis of the city as a unique form of social organization. From a multi-disciplinary perspective, the course presents the nature of urbanization and the impact of urbanism on contemporary society. Prerequisite: SOC 110 or 120. 3 credits.

230. Sociology of Marriage and the Family. An overview of marriage and the family focusing upon love, mate selection, alternative life styles, marital communication, conflict resolution, parenting, divorce and widowhood. Utilizes an historical and cross-cultural perspective in addition to sociological analysis. Prerequisite: SOC 110 or 120. 3 credits.

240. Diversity & Understanding. The major objective of this course is to help students become aware of the degree to which behavior (including one's own) is culturally deter-

mined. As we continue to move toward a global society with increasingly frequent intercultural contacts, we need more than simple factual knowledge about cultural differences; we need a framework for understanding inter-cultural communication and cross-cultural human relations. Through lecture, discussion, simulations, case-studies, role-plays and games, students will learn the inter-cultural communication framework and the skills necessary to make them feel comfortable and communicate effectively with people of any culture and in any situation involving a group of diverse backgrounds. Prerequisite: SOC 110, 120. 3 credits.

261. *The Aged and Aging.* An investigation of the process of aging and contemporary issues related to the elderly. Topics covered include Alzheimer's disease, retirement, stereotypes of the elderly and contributions of the elderly to society. Prerequisite: SOC 110 or 120. 3 credits.

271. *Child Abuse.* The study and analysis of child abuse in its various expressions with additional focus on physical and sexual abuse. Emphasis will be on models and theories of causation, dynamics, treatment and research. Prerequisite: SOC 110, 120. 3 credits.

272. *Substance Abuse.* An examination of the problems associated with substance abuse including a study of the prevalent myths concerning substance abuse, an exploration of the causes of substance abuse and an exploration of how it affects the individual, the family and society as a whole. In addition, the course will examine current methods of intervention and treatment. Prerequisites: SOC 110 or 120. 3 credits.

278. *Juvenile Delinquency.* An examination of the causes and effects of juvenile delinquency, the juvenile justice system and treatment programs for the juvenile offender. Prerequisite: SOC 110 or 120. 3 credits.

280. *Sexuality and Society.* Study of human sexuality from psychosocial and cultural perspectives. The course will include an examination of such topics as developmental sexuality, gender roles, sexual communication, sexual orientation, coercive sex, sexually transmitted diseases, HIV, and religious and ethical perspectives on sexuality. Prerequisite: SOC 110 or 120. 3 credits.

311. *Research Methods.* A study of the basic concepts and skills involved in critically evaluating and carrying out social scientific research. Topics include values and ethics of research on human behavior, research design, interviewing and questionnaire construction. Prerequisite: SOC 110, junior standing or permission. 3 credits.

322. *Sociology of Religion.* The structure and functions of religious organizations and phenomena with emphasis on the varieties of religious expression in America. Prerequisite: SOC 110 or 120. 3 credits. {Cross-listed as Religion 322.}

324. *Medical Sociology.* An examination of the societal bases of health, illness and health care. The course will include an examination of the three components of medicine: the patient, the medical professional and the health care organization. Specific topics will

include: the role of the patient; doctor-patient relationships; the socialization of medical professionals; the hospital as a complex organization, cross-cultural comparisons of health care and current topics of concern such as the AIDS epidemic, new technologies, and social response to the terminally ill patient. Prerequisite: SOC 110, 120. 3 credits.

326. Women's Issues, Women's Voices. An examination of women's contributions to the world, their roles in social institutions, and issues arising from their uniqueness and social situations. Topics will include images of women and their writings; biology and health; issues of sexuality and gender identity; and women's roles in the family, religion, education, and in the worlds of work and politics. Prerequisite: SOC 110, 120. 3 credits.

331. Criminology. An examination of the causes of crime. Special attention is given to violent crime, homicide, and rape. In addition, crimes such as arson, robbery, burglary and white collar crime are covered. The question of whether or not such victimless crimes such as pornography, prostitution and drug use should be considered crimes is explored. Prerequisite: SOC 110 or 120. 3 credits.

333. Criminal Justice. A sociological, historical, and philosophical examination of punishment and the criminal justice system. Rights of the accused, victimology, prisons, and the death penalty are studied. Prerequisite: SOC 110, 120. 3 credits.

340. Group Structure and Dynamics. An overview of the theory and research on small group organization and process including issues related to leadership, effective communication in groups, conformity and influence. Application of basic principles to practical situations. Exercises designed to improve group leadership and participation skills. Prerequisite: SOC 110 or 120. 3 credits.

351. Death and Dying. Exploration of the basic legal, medical, ethical and social issues related to contemporary understanding of death and dying. Examines the stages of dying, the grief process, euthanasia, suicide, the hospice movement and life after death. Prerequisite: SOC 110 or 120. 3 credits.

362. Race, Minorities and Discrimination. An examination of the patterns of structured inequality in American society, including a variety of minority, racial, and ethnic groups. Prerequisite: SOC 110, 120. 3 credits.

382. Sociology of the Mass Media. Seminar on how society shapes the mass media and the effects of the mass media on individuals and society. Topics include propaganda, television violence and aggression, and advertising. Special attention is given to values and images portrayed by the mass media. Prerequisite: 6 credits in sociology, junior standing or permission. 3 credits.

421. Social Theory. An intensive examination of the major sociological theorists and movements. Prerequisite: 12 credits in sociology. Prerequisite: SOC 110, 120. 3 credits.

499. Seminar. A critical analysis of selected themes and issues in contemporary sociology. Topics may vary. This course is conducted as a seminar requiring extensive student participation. Prerequisite: 12 credits of sociology or permission. 3 credits.

Social Work Program

The social work minor helps to prepare students for beginning professional practice in a variety of social work settings. The minor emphasizes the generalist approach by offering a solid foundation of core courses based on social work theory and practice. The program also provides students the opportunity to focus upon areas of personal and professional interest by choosing a concentration in such areas as criminal justice, family intervention, and the aged and aging/death and dying.

Degree Requirements:

No major is offered in social work.

Minor: SOC 110; SWK 242, 262, 272, 331; six credits of SWK 400; one sociology elective (24 credits).

Courses in Social Work (SWK):

242. Basic Interpersonal Relations Skill Processes. An introduction to the theory and skills of interpersonal relationships that are geared toward helping people resolve personal and social problems. The course features skill-building exercises as well as linkage of theory and skills. Open to students of any major who have an interest in interpersonal relationships or counseling. 3 credits.

262. Social Welfare. An introduction to social welfare policies and institutions including the evolution of the welfare system in our society and its approach to social problems. Focuses upon controversies relevant to public welfare. Prerequisite: SOC 110. 3 credits.

272. Human Behavior in the Social Environment. An examination of the interrelation of biological, psychological and sociocultural systems and their effects on human development and behavior. A life span perspective is used to develop an understanding of the total person as he/she functions in relation to his/her environment at each stage in the developmental process. The impact of diversity in ethnic background, race, class, sexual orientation and culture in a pluralistic society will also be addressed. Prerequisite: SOC 110. 3 credits.

331. Social Work Theory. A consideration of professional social work's knowledge, values, and skills base, with emphasis on generalist social work theory as it is utilized in case management. Prerequisite: SWK 242. 3 credits.

Criminal Justice Program

The chairs of the Sociology and Social Work and the Political Science and Economics Departments function as advisers for the criminal justice program. See page 110 for information on this program.

Faculty

Sharon O. Arnold, associate professor of sociology.

M.S.W., Temple University.

Among her teaching interests are sociology of the family, intercultural communication, small groups, and medical sociology. Her research interests are achievement orientation of female students and the use of telecommunications in higher education.

Marianne Goodfellow, lecturer in sociology.

Ph.D., The Pennsylvania State University.

Carolyn R. Hanes, professor of sociology. Chairperson.

Ph.D., University of New Hampshire.

Her areas of interest include family and marriage, criminology, criminal justice, mass media, and leadership. She is interested in the use of cooperative learning techniques.

Sharon Hall Raffield, associate professor of sociology.

M.S.W., Washington University.

Her areas of interest include social work practice with families, children, and elders as well as policies which impact upon them.

Robert D. Gingrich, adjunct instructor in social work.

M.S., Moravian College.

His teaching specialties include child abuse, juvenile delinquency and sexual abuse.



Students are often encouraged to work in small groups to provide hands-on learning in interpreting actual case studies and statistics.

GRADUATE ACADEMIC PROGRAMS

Lebanon Valley College offers two graduate programs. These programs are the Master of Business Administration (MBA) and the Master of Science Education (MSE).

The Master of Business Administration program is a multi-disciplinary program designed to prepare graduates for managerial responsibilities at various levels of business organizations. This program provides a strong theoretical foundation as well as operational expertise in the areas of finance, management, marketing, human resource management and operations management.

The Master of Science Education degree program is designed for elementary and middle school teachers, teaching in kindergarten through eighth grades, who want to enhance their understanding of science principles as well as their ability to teach these concepts to their students. This program focuses on the “hands-on” or experiential learning of science. Teachers with minimal experience in science and the methodology necessary to teach science to their students, as well as those with a strong background in one area of science and desire to complement it with comparable understanding of the other sciences, will benefit from this program.

Graduate Program Policies and Procedures

Academic Advising and Registration

Graduate students should meet with their academic adviser prior to class registration. The adviser will develop a graduation plan with the student. All course registrations require the adviser's signature.

Veteran Registration

The college meets all of the criteria of Veterans Education under the provisions of Title 38, United States Code, Section 1775. The graduate programs have been approved for payment assistance. Veterans pay the cost of tuition, fees, books and supplies directly to the college. They are reimbursed by the Veterans Administration on a monthly basis. Applicants having any questions concerning their veteran's benefits should contact the college's veterans representative in the Registrar's Office.

Transfer Credit

A maximum of nine credits (a maximum of six core credits) may be transferred from another graduate program with the approval of the program director and the registrar. No transfer credit shall be accepted if the grade earned at another institution was less than B. Students wishing to transfer credits may be asked to submit course outline, textbook used, and any reading materials so proper credit may be given.

Concurrent Courses

A student enrolled for a graduate degree may not take courses concurrently at another educational institution without prior consent of the academic adviser and the registrar.

Grading

Student work is graded A, A-, B+, B, B-, C+, C, and F. Candidates must maintain a grade point average of 3.00 with a maximum of two C grades in the program.

In addition, the symbols I and W are used. I indicates work that is incomplete but otherwise satisfactory. It is awarded only for substantial reason and work must be completed in the first eight weeks of the following semester, including summer session, or I will be changed to F.

W indicates withdrawal from a course through the first 10 weeks. Thereafter, the appropriate letter grade will be assigned for the course.

No graduate course may be taken pass/fail.

Review Procedure

Every student's academic progress shall be reviewed at the end of each academic period by the academic adviser. Any student whose average falls below 3.00 or who earns a C or F in three or more credit hours may be placed on academic probation. A student on academic probation may be required to retake courses or correct other academic deficiencies and must achieve a 3.00 cumulative average within two semesters of being placed on probation. A student may repeat a maximum of two graduate courses with any given course being repeated only once. Students who fail to correct deficiencies may be dropped from the program. A student may appeal any decision of the program director to the senior vice-president and dean of the faculty.

Course Withdrawal and Tuition Refund

Any student who withdraws from courses for which he or she is registered must notify the adviser in writing. The effective date of withdrawal is the date on which the student notifies the office. Failure to give notice of withdrawal will result in a grade of F. Notifying the instructor does not constitute official withdrawal. A refund schedule based on official withdrawal date is published in the semester brochure.

Time Restriction

The maximum time for completion of a graduate program is seven years from the date of the admission letter. Students who have not earned the graduate degree during this period shall have their academic standing reviewed and may be asked to meet additional requirements in order to graduate.

Academic Dishonesty

Students are expected to uphold the principles of academic honesty. Academic dishonesty will not be tolerated. For the first academic dishonesty offense, failure in the course is mandatory, and the faculty member is required to inform the program director in writing. A

letter of warning shall be sent to the student by the program director explaining the consequences and the right of appeal. For the second offense, failure in the course and expulsion from the graduate program and college are mandatory.

Address Changes

Any change of address must be reported to the Continuing Education Office as soon as possible. A forwarding address should also be given to the Postal Service.

Privacy of Student Records

In accordance with the Family Educational Rights and Privacy Act of 1974 (P.L. 39–380) Lebanon Valley College releases no student education records without written consent and request of the student or as prescribed by the law. Each student has access to his or her education records with exclusions only as specified by the law.

Financial Aid

Students may participate in the Direct Stafford Loan Program. Graduate students should contact the Financial Aid Office at 717–867–6181 to discuss financial aid eligibility.

Employee Tuition Reimbursement

Students are encouraged to inquire about tuition reimbursement programs at their places of employment. Most employers of current students provide education subsidies of 50 – 100% of tuition. Some employers authorize the college to bill them directly. In this case, students must present billing authorization when they register.

Withdrawal from Program and College and Readmission

To withdraw from Lebanon Valley College, a graduate student must complete an official withdrawal form obtained from the academic adviser. To apply for readmission, a graduate student must have the written approval of the program director.

MASTER OF BUSINESS ADMINISTRATION

The MBA Program at Lebanon Valley College is a unique program that combines liberal arts studies with career preparation in the field of business administration. The multi-disciplinary nature of the curriculum includes standard MBA level courses along with exposure to courses in Executive Communications, Executive Leadership and Corporate and Organizational Ethics.

MBA Admissions:

All candidates must have a bachelor's degree from an accredited college or university.

All candidates must submit a current resume and a completed application form with the required application fee. They must take a GMAT examination and have the official test results sent to the MBA Office. Official transcripts of all undergraduate work and any graduate courses to be considered for transfer must be sent by the respective colleges or universities to the MBA Office. An individual interview is strongly recommended.

Graduate admissions are on a rolling basis; action will be taken quickly after all paperwork has been processed.

Graduation Requirements:

A candidate for the MBA must complete a maximum of 36 credits, of which 27 must be earned at Lebanon Valley College. There are nine required core courses (27 credits) and three electives of the student's choice (9 credits) for a total of 36 credits. A candidate must achieve at least a 3.00 cumulative average with a maximum of two C's within the 36 graduate credits to be certified for graduation.

Degree Requirements:

Every MBA candidate must complete 27 credits of core courses and 9 credits of electives. (MBA special topic courses can be used to meet MBA elective requirements.) All courses in the undergraduate common body of knowledge also must be completed successfully. Courses in the Lebanon Valley College MBA Program are taught on the Annville and Lancaster campuses as well as a Camp Hill location.

Degree: Master of Business Administration.

Undergraduate Core (Common body of knowledge): ACT 161, 162; BUS 230, 322, 340, 361, 460; ECN 101, 102; MAS 170.

Graduate Core: ENG 825; LSP 835; MGT 805, 815, 820, 860, 895; PHL 830; PSY 810 (27 credits) and three of the following ACT 875; ECN 865; MGT 800, 840, 850, 855, 870, 880; special topics (9 credits). Total of 36 credits.

MBA Courses:

MGT 755. Management and Marketing Principles. A review of management principles and marketing principles. Topics include: organizational theory, administrative techniques, marketing strategies, marketing research, buying behavior, selecting target markets, pricing, distributing and promoting products and services. 0 credits.

ECN 765. Economic Principles. A review of macroeconomic and microeconomic principles. Topics include: national income determination; price level; employment; economic growth; domestic and foreign monetary systems and policies; price, production and distribution theories; welfare economics; and public policy. 0 credits.

ACT 775. Accounting and Financial Applications. A review of financial and managerial accounting. Topics include: the four basic financial statements, analytical analysis, cost control, and budgeting. 0 credits.

MGT 785. Quantitative Methods and Statistics. A review of quantitative methods and elementary statistics used in modern management science and economics. Topics include: linear programming and applications, forecasting, inventory models, PERT/CPM, waiting line models, computer simulation, probability distributions and decision theory. 0 credits.

MGT 795. Financial Management Techniques. A review of financial management techniques. Topics include: financial analysis and forecasting, the time value of money, valuation theory, capital budgeting and planning, risk assessment, short term financing, long term financing, and the capital market. Prerequisites: ACT 775 and MGT 785. 0 credits.

ACT 875. Managerial Accounting. Provides students previously exposed to basic financial and managerial accounting principles with an opportunity to study the structure and use accounting systems designed to aid management in controlling costs and profits. Stresses financial statement analysis, sources and uses of funds analysis, tax implications on managerial decisions, responsibility accounting and the impact of inflation. 3 credits.

ECN 865. Entrepreneurship. Entrepreneurship, intrapreneurship, small business, and acquisitions. Special attention to entrepreneurial behavior, sources of funding, and actual case studies in the development of new enterprises. 3 credits.

ENG 825. Executive Communications. Organizational communication skills, emphasizing writing, speaking and listening techniques. Interpersonal communication. Explores and increases communication options on individual, group and organizational levels. 3 credits. (Must be one of the first 3 courses taken in the MBA program.)

HIS 840. American Business History. A historical analysis of the history of American business. The course is developed through a case study approach with a significant research component. 3 credits.

LSP 835. Executive Leadership. Theories and concepts of leadership. Examination of the forces in the leader–follower interaction. Analysis of the skills, behaviors, attitudes, and values of effective and ethical leaders and followers. Application of concepts, information, and experience to case studies. 3 credits.

MGT 800. Quantitative Analysis. Surveys mathematical foundations of management science. Topics include linear programming, transportation and assignment problems, decision and network analysis, stochastic processes, queuing and simulation. Introduction appropriate computer software. 3 credits.

MGT 805. Financial Policy. A quantitative approach to managerial problems of long term financing, asset management, dividend policy, and ethics in the firm and marketplace. Emphasis placed on the application of experience to class discussion based on the use of *The Wall Street Journal*. 3 credits.

MGT 815. Marketing Management. Seminar focusing on issues in the interplay between marketing and society including the ethics of selling, advertising, marketing research and the social responsibility of marketers. Prerequisite: ENG 825 strongly recommended. 3 credits.

MGT 820. Operations Management. Systems approaches to management of production and service organizations. Topics include design and control of operations, operations strategy, product and process planning, quality management, human resources, scheduling and control, and materials management. Emphasis is on mathematical foundations and quantitative techniques of management science/operations research (MS/OR), related MS/OR tools and applications, the priority/capacity organizational concepts and the strategy underlying operations. Introduces appropriate computer software. 3 credits.

MGT 850. Human Resource Management. A survey of personnel management activities in organizations including exploration of recent developments in the field of human resource management. Topics include human resource planning, recruitment, selection, training, equal employment opportunity, performance appraisal, discipline, career planning, compensation, safety and health. Instruction method includes case study, readings and classroom lecture. Prerequisite: ENG 825, PSY 810 recommended. 3 credits.

MGT 855. Legal Environment of Business. Legal concepts and principles important to business decision making including employment law, labor–management relations and relevant legislation, tax consequences of business transactions, government regulation, contract law and application of the Uniform Commercial Code to business transactions. Case study, readings and lecture. Prerequisite: ENG 825, PHL 830 recommended. 3 credits.

MGT 860. International Business Management. Theories, concepts, practices and techniques of conducting business in foreign countries. The strategic issues, the operational practices, and the governmental relations of multinational companies are analyzed through use of case study, lecture and speakers. Topics include: economic, political and cultural integration; trade restrictions and barriers; overseas investment and financing; entry into foreign markets and marketing strategies. 3 credits.

MGT 870. Labor Management Relations. Directed primarily to the understanding of the issues and alternatives arising out of the work place. The course provides both an overview of what has been identified as industrial relations as well as familiarity with the tools used by its practitioners. Students will study negotiation, administration, wage/fringe issues and contents of labor agreements. Prerequisite: ENG 825. 3 credits.

MGT 880. Investments and Portfolio Management. This course acquaints the student with the tools essential for sound money management. Considers the goals of the investor with respect to risk exposure, tax environment, liquidity needs and appreciation versus income potentials. Strategies will be developed to satisfy these objectives. Mathematical models of portfolio selection to help reduce risk through diversification will be developed. Special attention will be paid to the theories of determinants of asset prices, including the capital-asset pricing model. Prerequisite: MGT 805. 3 credits.

MGT 895. Strategic Management. The strategic management of large business entities, including the formulation and evaluation of missions, strategies, objectives and policies. Historical and current situations are discussed. Cases are widely used and outside research is required. Prerequisite: 24 hours of graduate credit. 3 credits.

PHL 830. Corporate and Organizational Ethics. The ethical assumptions and implications of corporate and organizational policies and practices. Intensive readings in the literature of both theoretical and applied ethics. Case study analysis. Includes: corporate and organizational social and political responsibility, ethics and business, ethics and organizational life, and governmental relations. Prerequisite: ENG 825 and LSP 835 or PSY 810. 3 credits.

PSY 810. Organizational Behavior. Systematic presentation of theory and research in areas of organizational behavior; including motivation, group dynamics, leadership, decision-making, organization change, career planning, and communication. 3 credits.

Special Topics. Special topics courses are presented for the examination of current issues or topics of special interest that are relevant to the MBA curriculum. These courses are formal courses that are not listed permanently in the catalog. MBA special topic courses can be used to meet MBA elective requirements.

MBA Administration and Resident Faculty

Howard L. Applegate, professor of history and American studies.

Ph.D., Syracuse University.

Applegate teaches American business history.

Cheryl L. Batdorf, academic adviser, MBA program.

M.B.A., Lebanon Valley College.

Marie G. Bongiovanni, assistant professor of English.

M.B.A., Drexel University.

Bongiovanni teaches executive communications.

Donald C. Boone, assistant professor of hotel management.

M.B.A., Michigan State University.

Boone teaches accounting.

Sharon F. Clark, professor of business administration.

J.D., University of Richmond.

Clark has several years experience in private law practice and several years as a supervisory tax attorney with the Internal Revenue Service.

Jeanne C. Hey, associate professor of economics.

Ph.D., Lehigh University.

Hey teaches managerial economics.

Robert W. Leonard, associate professor of business administration.

M.B.A., Ohio State University.

Leonard's teaching specialties include finance, production and service management, organizational behavior and development, and labor and industrial relations.

Daniel B. McKinley, director of freshmen programs.

M.A., University of Maryland. M.A.L.S., Wesleyan University.

McKinley maintains an interest in small group development and offers leadership laboratories for communication skills development.

James W. Mentzer Jr., director of the MBA program, associate professor of management.

M.B.A., Chaminade University.

Mentzer teaches executive leadership.

Barney T. Raffield III, professor of business administration.

Ph. D., Union Graduate School.

Raffield teaches courses in marketing and international business management.

Gail Sanderson, associate professor of accounting.

M.B.A., Boston University, CPA.

Sanderson has professional experience in accounting (public and private sectors); income tax; computer systems analysis and design.

Barbara S. Vlaisavljevic, associate professor of accounting.

J.D., Widener University.

She teaches accounting and financial applications.

MASTER OF SCIENCE EDUCATION

Students enrolled in this program will concentrate on the principles and content of science as well as the appropriate teaching strategies to convey these ideas to their students. All of the courses are designed to maximize the opportunity for doing science instead of merely learning about science. The program will culminate with the satisfactory completion of a comprehensive examination and the production of a thesis in science education.

MSE Admissions:

To qualify for admission to the Master of Science Education Program the applicant must fulfill the following requirements:

- An applicant must hold a baccalaureate degree from an accredited institution.
- An applicant should have an undergraduate major in elementary education. Applicants holding a secondary science teaching degree and currently teaching in a middle school will be considered for entrance after meeting with the graduate committee of the department.
- An applicant must have achieved a 3.0 quality point average (QPA) on a four-point scale for the baccalaureate degree. An applicant with less than the 3.0 QPA may be admitted with provisional status pending satisfactory completion of six semester hours of graduate study with a 3.0 or above.
- A maximum of nine semester hours of acceptable graduate credits completed at other institutions may be transferred and applied toward the Master of Science Education degree with approval of the advisor. Transfer credits must meet a grade of 3.0 or above.
- An applicant must arrange to have official transcripts submitted for each undergraduate institution attended. If transfer credits are to be considered, transcripts from graduate courses must also be requested by the applicant.
- An applicant will be interviewed by no less than three members of the Science Education Masters Committee.

Comprehensive Examinations:

After completing 21 hours of coursework, with a GPA of at least 3.0, the student must pass a written examination prepared and evaluated by his/her graduate committee. The purpose of the examination is to evaluate the student's competence in applying the course content and methodology to actual as well as theoretical classroom situations. The examination will take approximately six hours to complete and will consist of four questions related to courses completed and professional teaching dilemmas as they relate to science.

Degree Requirements:

A candidate for the MSE must complete a minimum of 30 credits, of which 21 must be earned at Lebanon Valley College. There are six required core courses, (18 credits), any electives

of the student's choice (6 credits), and a research thesis (6 credits) for a total of 30 credits. A candidate must achieve at least a 3.00 cumulative average to be certified for graduation.

Degree: Master of Science Education

Graduate Core: MSE 800, 801, 802, 803, 811, 812, 830 (24 credits) and two of the following: MSE 805, 806, 807, 814, 815, 816, 820 (6 credits). Total of 30 credits.

MSE Courses:

MSE 800. Science Education in the Elementary/Middle School Classroom. This course serves as an introduction to the content and methodology of science instruction as it relates to hands-on, minds-on science process skills in the elementary and middle school classrooms. Setting the tone for the entire program, it makes clear to participants the basic format which will be followed by subsequent courses. 3 credits.

MSE 801. Principles of Life Science for Elementary/Middle School Teachers. This course addresses life science topics prevalent in virtually all science curricula as well as those set forth in the National Science Education Standards. Students will engage the use of scientific method to address topics typically taught in life science courses. 3 credits.

MSE 802. Principles of Physical Science I for Elementary/Middle School Teachers. This course will utilize concepts in chemistry to make connections to common substances. Establishing chemistry as an integral part of everyday life as well as discoveries made through serendipity will make this topic relevant to all students. 3 credits.

MSE 803. Principles of Physical Science II for Elementary/Middle School Teachers. Students will utilize hands-on experimental methods to gain confidence and experience with inquiry-based learning of physics. Topics will include motion, heat, light, electricity, and magnetism. 3 credits.

MSE 805. Principles of Earth and Space Science for Elementary/Middle School Teachers. The interaction and effects of geology, meteorology, and space exploration will be explored in this course. 3 credits.

MSE 806. Principles of Field Biology/Ecology for Elementary/Middle School Teachers. Environmental studies illustrating the basic principles of field biology and ecology will be used to demonstrate the interdependence of living and nonliving systems. Current topics in ecology, as they relate to the preservation of our planet and its resources, will be addressed. This course will focus on the collection of data and/or organisms outside the classroom. Appropriate methods for elementary/middle school students will be utilized and practiced. 3 credits.

MSE 807. Microscopy for Elementary/Middle School Teachers. This course will introduce the use of a variety of microscopes, starting with the hand-held microscopes and continuing through compound and dissecting microscopes. It culminates with the use of the scanning electron microscope. Students also will master preparative techniques and slide making. 3 credits.

MSE 811. Curriculum Development Using the National Standards. Using the Standards in curriculum development, the classroom and other aspects of the public and private school systems will be the focus of this course. Alternative and authentic assessment, professional standards and current developments in science education will be taught with the elementary/middle school teacher and student in mind. 3 credits.

MSE 812. Assessment in Science Teaching. A variety of assessment techniques, especially applicable to hands-on or experiential learning, will be presented. The focus will be on developing and adapting authentic assessment for all learners of science. 3 credits.

MSE 814. History of Science. The historical prospective of science and scientists from ancient through modern history. Focus will include discoveries and scientists from both sexes and all ethnic backgrounds. Methods of integrating history and science in the elementary/middle school classroom will be addressed. 3 credits.

MSE 815. Recent Advances in Science. Modern concepts and recent advances in science will be studied through books, news magazines, and newspapers. 3 credits.

MSE 816. Science, Technology and Society. The educational objective for quality science education is to produce a society which is literate in science, able to solve problems, and can function as critical thinkers. This course utilizes biotechnology, among other areas of study, as a method of illustrating the need for and ultimate use of science and technology so they benefit society. Ethical issues involving science and technology will be discussed. 3 credits.

MSE 820. Seminar. This course will permit some flexibility to explore current topics in elementary/middle school education as they arise. A seminar course will permit special topics to be included in the course of study. In addition, certain transfer courses may be valid for degree accreditation but may not be a complete match in the courses listed. 3 credits.

MSE 830. Research in Science Education. A topic relevant to the teaching of science in the elementary/middle school classroom will be researched with the approval of the student's advisor. The topic of research should be well documented in professional journals and studies. 6 credits.

MSE Administration and Faculty

Linda F. Ebright, adjunct assistant professor of chemistry.

M.S., University of Pittsburgh.

Ebright teaches the principles of physical science in the elementary/middle school course.

Marla Wagner Jones, acting director of the MSE program.

M.Ed., Clarion University of Pennsylvania.

Jones is the coordinator of the Lebanon Valley College Science Education Partnership and teaches science education in the elementary/middle school.

DIRECTORY

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Trustees

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A.L. Hanford III, *B.A.*; *Owner/Operator, Ladd Hanford Motors, Inc.; President, Photographic Rotary Screen Co.* (2000).

Wendie DiMatteo Holsinger, *B.A., M.Ed.*; *Chief Executive Officer, A.S.K. Foods, Inc.* (1999).

F. Obai Kabia '73, *M.P.A., B.S.; Political Affairs Officer* (1998).

Alfred S. Maloney, *B.S., M.A., M. Div.*; *Clergy/District Superintendent, Harry Hosier District* (1998).

James A. Mitchell, *B.S., M.B.A.; Retired Corporate Insurance Manager, E.I. DuPont de Nemours & Co.* (1998).

Brian R. Mund, *B.S., M.B.A.; President, Surphratt Investments* (1999).

Beth A. Paul '98; *Student, Lebanon Valley College* (1998).

G. David Pollick, *B.S., M.A., Ph.D.; President, Lebanon Valley College*.

George M. Reider Jr. '63, *B.S.; Insurance Commissioner, State of Connecticut, Department of Insurance* (1998).

Thomas C. Reinhart '58, *B.S., L.H.D.; Owner/President, T.C.R. Packaging, Inc.* (1999).

Bruce R. Rismiller '59, *B.A., M.Ed.; Retired Executive Vice President, Northwest Airlines* (1998).

Stephen H. Roberts '65, *B.S., President, Echo Data Services, Inc.* (1998).

Gail A. Sanderson, *B.A., M.B.A.; Associate Professor of Accounting, Lebanon Valley College* (2000).

Conrad M. Siegel, *F.S.A., B. Com., M.S.; Consulting Actuary, Conrad M. Siegel, Inc.* (1998).

Morton Spector; *Chairman of the Board and Treasurer, D & H Distributing Company* (1998).

Susan E. Verhoek, *B.A., M.A., Ph.D.; Professor of Biology, Lebanon Valley College; Director of the Lebanon Valley College Arboretum* (1998).

John Walter '53, *B.S., J.D.; Retired President Judge, Lebanon County Court of Common Pleas* (1998).

Albertine P. Washington, *B.A., P.D.; Elementary Teacher, Lebanon School District* (1998).

J. Dennis Williams, *B.A., M.Div., D.Min., D.D.; Retired Pastor, St. John's United Methodist Church* (2000).

Samuel A. Willman '67, *B.S., M.Com.; President, Delta Packaging, Inc.* (1999).

Harry B. Yost '62, Esq., *B.S., LL.D., LL.M.; Partner, Appel & Yost* (2000).

Emeriti

William D. Boswell, Esq., *LL.B., Ph.B.; Attorney, Boswell, Snyder, Tintner & Piccola.*

Raymond H. Carr; *Realtor; Commercial and Industrial Developer.*

Eugene C. Fish, Esq., *B.S., J.D., D.H.L.; Chairman and President, Peerless Industries, Inc.; Chairman of the Board, Eastern Foundry Company; Managing Partner, Romeika, Fish and Scheckter.*

Arthur L. Goldberg, Esq., *B.A., J.D.; Attorney, Goldberg, Katzman and Shipman, P.C.*

Thomas W. Guinivan '39, *A.B., B.D., D.D.; Retired Pastor, United Methodist Church.*

Paul E. Horn '40, *A.B., M.Div.; Retired Pastor, United Methodist Church.*

Gerald D. Kauffman '44, *A.B., B.D., D.D., Retired Pastor, United Methodist Church; Officer of the Courts, County of Cumberland; Pastor Emeritus, Grace United Methodist Church, Carlisle.*

Allan W. Mund, *LL.D., D.B.A.; Retired Chairman of the Board, Ellicott Machine Corporation.*

Harold S. Peiffer '42, *A.B., B.D., S.T.M., D.D.; Retired Pastor, United Methodist Church.*

Kenneth H. Plummer; *Retired President, E.D. Plummer Sons, Inc.*

Jessie A. Pratt, *B.S.; Retired Administrative Assistant, Sanctions Division, City of Philadelphia.*

Melvin S. Rife; *Retired Executive, St. Regis Paper Company.*

F. Allen Rutherford Jr. '37, *B.S., LL.D.; Retired Principal, Arthur Young and Company.*

Daniel L. Shearer '38, *A.B., S.T.M., B.D.; Retired Pastor, United Methodist Church.*

E. Peter Strickler '47, *B.S.; President, Strickler Insurance Agency.*

Elizabeth K. Weisburger '44, B.S., Ph.D., D.Sc.; Retired Chief of Carcinogen Metabolism and Toxicology Branch, National Cancer Institute.

Harlan R. Wengert, B.S., M.B.A., D.Sc.; Chairman of the Board, Wengert's Dairy, Inc.

E.D. Williams Jr., L.H.D.; Private Investor.

Charles W. Wolfe '44, B.A., M.Div.; Retired; Vice President Emeritus, Bucknell University.

Honorary

Bishop Neil L. Irons, B.A., M.A., M. Div., Ph.D., D.D., Resident Bishop of the Harrisburg Area of The United Methodist Church.

Anne B. Sweigart, B.S.; Chairman, President and Chief Executive Officer, Denver and Ephrata Telephone and Telegraph Company.

Bishop Peter Weaver, M. Div., Th.D., B.A., Resident Bishop of the Philadelphia Area of The United Methodist Church.



Faculty and staff take the time to offer individualized attention to students.

ADMINISTRATION

President

G. David Pollick, 1996-. *Professor of Humanities, 1996-. B.A., University of San Diego, 1971; M.A., University of Ottawa, 1973; Ph.L., St. Paul's University, 1973; Ph.D., University of Ottawa, 1981.*

Andrea Folk Bromberg, 1992-; *Executive Assistant to the President, 1993-; B.A., American University, 1973; M.B.A., University of Montana, 1978.*

General College Officers

Deborah R. Fullam, 1982-; *Vice President and Controller, 1995-. B.S., Lebanon Valley College, 1981; M.B.A., Philadelphia College of Textiles & Science, 1988.*

Robert E. Hamilton, 1986-; *Vice President for Administration, 1990-. A.B., Messiah College, 1962; M.Ed., Shippensburg University, 1966; D.Ed., The Pennsylvania State University, 1972.*

William J. McGill Jr., 1986-; *Senior Vice President and Dean of the Faculty, 1995-. A.B., Trinity College, 1957; M.A., Harvard University, 1958; Ph.D., 1961.*

Deborah Ann Weekly Read, 1997-; *Vice President for Advancement, 1997-. B.A., University of Maryland, 1977.*

Robert A. Riley, 1976-1978, 1988-; *Vice President of Computing and Telecommunications, 1995-. B.S., Elizabethtown College, 1976.*

Gregory G. Stanson, 1966-; *Vice President for Enrollment and Student Services, 1991-. B.A., Lebanon Valley College, 1963; M.Ed., University of Toledo, 1966.*

ADMINISTRATIVE OFFICERS

Academic

William J. McGill, *Senior Vice President and Dean of the Faculty.*

Cheryl L. Batdorf, 1993-; *Academic Adviser to the MBA Program, 1993-. B.S., Shippensburg University, 1983; M.B.A., Lebanon Valley College, 1992.*

Karen Diener Best, 1990-; *Registrar, 1990-. B.A., Dickinson College, 1989.*

Barbara Jones Denison, 1987-; *Director of the Lancaster Center, 1995-. B.A., Lebanon Valley College, 1979; M.A., University of York, 1981; Ph.D., Northwestern University, 1985.*

Alice S. Diehl, 1966-; *Technical Processes Librarian, 1966-. A.B., Smith College, 1956; B.S., Carnegie Institute of Technology, 1957; M.L.S., University of Pittsburgh, 1966.*

Dale J. Erskine, 1983-; Director, Youth Scholars Institute, 1985-. B.A., University of Maine at Portland, 1974; M.A., State University of New York at Buffalo, 1976; Ph.D., University of Oklahoma, 1981.

Elaine D. Feather, 1989-; Director of Continuing Education, 1989-. B.S., State University of New York College at Cortland, 1965; M.S., State University of New York College at Brockport, 1973.

Arthur L. Ford, 1965-; Dean of International Programs, 1996-. A.B., Lebanon Valley College, 1959; M.A., Bowling Green State University, 1960; Ph.D., 1964.

Jaclyn Fowler-Frey, 1997-; Director of Academic Services, 1997-. B.A., Franklin and Marshall College, 1988; M.Ed., Millersville University, 1991; D.Ed., The Pennsylvania State University, 1997.

Stanley A. Furmanak, 1990-; Systems and Reference Librarian, 1994-, B.A., University of Scranton, 1978; M.A., The Catholic University of America, 1981; M.L.S., Southern Connecticut State University, 1984.

Andrew S. Greene, 1990-; Director of Media Services, 1992-. B.S., Kutztown University, 1990.

Shirley Hockley, 1996-; Academic Advisor for Continuing Education, 1996-. B.A., Lebanon Valley College, 1980; M.A., Bowling Green State University, 1994.

John D. Hoke, 1994-; Adjunct Catholic Chaplain, 1994-. B.A. Mount St. Mary's College, 1971; M.A., 1975.

Marcus Horne, 1992-; Science Departments Stock Coordinator, Hazardous Waste Materials Officer. B.S., Lebanon Valley College, 1992.

Marla Wagner Jones, 1994-; Coordinator, Lebanon Valley College Science Education Partnership, 1994-; Acting Director of the Master's of Science Education Program, 1997-. A.A., Harrisburg Area Community College, 1991; B.A., The Pennsylvania State University, 1993; M.S., Clarion University of Pennsylvania, 1996.

Patricia K. Laudermilch, 1987-; Assistant Registrar, 1996-. B.A., Lebanon Valley College, 1996.

Leon E. Markowicz, 1971-; Director of Academic Support Programs, 1990-. A.B., Duquesne University, 1964; M.A., University of Pennsylvania, 1968; Ph.D., 1972.

Leo Mazow, 1996-; Director of the Suzanne H. Arnold Gallery, 1996-. B.A., University of Denver, 1986; M.A., University of Colorado, 1989; Ph.D., University of North Carolina at Chapel Hill, 1996.

James W. Mentzer Jr., 1994-; *Director of the MBA Program, 1994-. B.B.A., The Pennsylvania State University, 1983; M.B.A., Chaminade University, 1988.*

Donna L. Miller, 1986-; *Readers' Service Librarian, 1986-. B.S., Millersville University, 1984; B.A., Lebanon Valley College, 1993; M.L.S., Drexel University, 1986.*

P. Robert Paustian, 1991-; *Librarian, 1991-. B.A., University of Missouri, 1971; M.A., University of Kansas, 1975; M.A., University of Missouri, 1979.*

Susan Szydłowski, 1995-; *Director of Special Music Programs, 1995-. B.A. Colby College, 1969.*

D. Darrell Woomer, 1992-; *Chaplain, 1992-. Interim Director of the Honors Program, 1996-. B.A., Juniata College, 1964; M.Div., Pittsburgh Theological Seminary, 1969; Th.M., 1972; M.A., Duquesne University, 1986; Ph.D., 1996.*

Enrollment and Student Services

Gregory G. Stanson, *Vice President for Enrollment and Student Services.*

Louise Answine, 1993-; *Counseling Psychologist, 1993-. B.A., Muhlenburg College, 1984; M.S., Millersville University, 1989; C.A.C., P.C.A.C.B., 1993.*

Lisa Beard, 1992-; *Hall Director. B.S., Lebanon Valley College, 1993.*

Richard L. Beard, 1994-; *Director of the Arnold Sports Center, 1997-; Hall Director, 1992-. B.A., Lebanon Valley College, 1989; M.B.A., 1992.*

Susan Borelli-Wentzel, 1990-; *Assistant Director of Admission, 1992-. B.A., Albright College, 1989.*

Mark A. Brezitski, 1986-; *Assistant Director of Admission, 1995-. B.A., Shippensburg University, 1985.*

William J. Brown, Jr., 1980-; *Dean of Admission and Financial Aid, 1993-. B.A., Lebanon Valley College, 1979; M.B.A., Philadelphia College of Textiles and Science, 1988.*

Donna Centofanti, 1996-; *Hall Director, 1996-. B.A., Lebanon Valley College, 1995.*

Julie A. Dyck, 1997-; *Counseling Psychologist, 1997-; B.A., Fresno Pacific College, 1985; M.A., Ph.D., California School/Professional Psychology, Fresno, 1993.*

David C. Evans, 1981-; *Director of Career Planning and Placement, 1989-. B.A., Slippery Rock University, 1969; M.Ed., Rutgers University, 1970.*

Jennifer Dawson Evans, 1991-; Director of Student Activities and the College Center, 1995-. B.S., Kansas State University, 1989; M.S., Shippensburg University, 1991.

Vicki Gingrich, 1994-; Adviser to International Students, 1994-. B.S., Mansfield University, 1975.

Ronald K. Good, 1983-; Associate Director of Admission, 1991-. B.S. in Ed., Millersville University, 1959; M.Ed., 1966.

David W. Heeter, 1996-; College Physician, 1996-. D.O., Philadelphia College of Osteopathic Medicine, 1991.

John T. Hower, 1988-; Counseling Psychologist, 1988-. B.A., Wheaton College, 1970; M.A., Rosemead School of Psychology, 1974; Ph.D., 1977.

Linda Hower, 1993-; Counseling Psychologist, 1993-. B.A., Wheaton College, 1971; M.S.W., Temple University, 1992.

Pauline Kreider, 1995-; Staff Nurse, 1995-. R.N. Diploma, St. Joseph's Hospital, 1960.

Jennifer Liedtka, 1994-; Assistant Director of Financial Aid, 1996-. B.S., Lebanon Valley College, 1992.

Gary A. Luken, 1995-; College Physician, 1995-. M.D., University of Cincinnati, 1977.

Daniel B. McKinley, 1988-; Director of Freshmen Programs; Coordinator of Lebanon Valley Educational Partnership, 1995-. B.S., United States Coast Guard Academy, 1968; M.A.L.S., Wesleyan University, 1973; M.A., University of Maryland, 1982.

Dawn E. Murray, 1995-; Admission Counselor, 1995-. B.A., Millersville University, 1995. (On leave 1997-1998).

David W. Newell, 1992-; Assistant Dean of Student Services, 1992-, B.A. Heidelberg College, 1987; M.S., Bowling Green State University, 1989.

Robert K. Nielsen, 1993-; College Physician, 1993-. M.D., Albany Medical College, 1975.

Mindy Parnes, 1995-; College Physician, 1995-. M.D., State University of New York, 1989.

Heather L. Richardson, 1991-; Assistant Director of Admission and Financial Aid Counselor, 1995-. B.S., University of Delaware, 1989.

Karin L. Right-Nolan, 1994-; Director of Financial Aid, 1995-. B.A., Allegheny College, 1994.

Susan Sarisky, 1993-; *Admission Counselor*, 1993-. B.A., Lebanon Valley College, 1992.

Kimberly A. Saunders, 1996-; *Multi-Cultural Adviser/Assistant Director of Student Activities*, 1996-. B.S., University of Delaware, 1992; M.S., Shippensburg University, 1996.

Robert Simmons, 1996-; *Hall Director*, 1996-. B.A., Wilkes University, 1993.

Mary Jane Thomas, 1996-; *Staff Nurse*, 1996-. R.N., Harrisburg Hospital School of Nursing, 1952.

Jon Westcott, 1996-; *Hall Director*, 1996-. B.A., Lebanon Valley College, 1993.

Cornell L. Wilson, 1997-; *Hall Director*, 1997. B.A., Lebanon Valley College, 1996.

Juliana Z. Wolfe, 1975-1978; 1979-; *Director of Health Center and Head Nurse*, 1979-. R.N., Diploma, St. Joseph's Hospital, 1963.

Rosemary Yuhas, 1973-; *Dean of Student Services*, 1991-. B.S., Lock Haven University, 1966; M.Ed., West Chester University, 1970.

Advancement

Deborah Ann Weekly Read, *Vice President for Advancement*.

Shanna G. Adler, 1992-; *Director of Alumni Programs*, 1997-. B.S., Bucknell University, 1992.

C. Paul Brubaker Jr., 1989-; *Director of Planned Giving*. B.S., Franklin and Marshall College, 1952; M.B.A., Wharton Graduate School, University of Pennsylvania, 1955.

Mary Beth Hower, 1990-; *Director of Media Relations*, 1993-. B.A., Messiah College, 1990.

Pamela V. Lambert, 1987-; *Assistant Director of Annual Giving*, 1997-. B.A., Lebanon Valley College, 1996.

Carolyn A. Lauver, 1992-; *Acting Director of Development*, 1997-; *Director of Annual Giving*, 1992-; *Associate Director of Development*, 1996-. B.Mus., College Misericordia, 1963.

Jane Marie Paluda, 1990-; *Assistant Director of College Relations*, 1995-; *Director of Publications*, 1990-; B.A., Moravian College, 1980.

Judy Pehrson, 1989-; *Executive Director of College Relations*, 1994-. B.A., University of Michigan, 1968; M.A., 1972; *Certificate for Teaching English as a Second Language*, Trinity College, London, 1993.

Financial Affairs

Deborah R. Fullam, *Vice President and Controller.*

Dorothy A. Brehm, 1993-; *Accounts Receivable Coordinator, 1996-. B.S., The Pennsylvania State University, 1976.*

Ben D. Oreskovich, 1994-; *Assistant Controller, 1994-. A.S., Danville Area Community College, 1990; B.S., The Pennsylvania State University, 1993.*

David I. Lasky, 1974-; *Director of Institutional Research, 1995-. A.B., Temple University, 1956; M.A., 1958; Ph.D., 1961.*

Dana K. Lesher, 1990-; *Payroll and Benefits Administrator, 1995-. B.A., Millersville University, 1977.*

Computing and Telecommunications

Robert A. Riley, *Vice President of Computing and Telecommunications.*

Sheryl A. Campbell, 1996-; *Assistant Director of Administrative Computing, 1996-. B.A., Elizabethtown College, 1992.*

Robert J. Dillane, 1985-; *Director of Administrative Computing, 1986-. B.S., Lebanon Valley College, 1977.*

Crystal L. Egan, 1996-; *User Support Specialist, 1996-. B.S., The Pennsylvania State University, 1988.*

Eric M. Flickinger, 1997-; *Network Support Specialist, 1997-. B.S., Towson State University, 1995.*

Walter L. Smith, 1961-1969; 1971-; *Director of Special Services, 1982-. B.S., Lebanon Valley College, 1961; M.S. in Ed., Temple University, 1967.*

Michael C. Zeigler, 1990-; *Director of User Services, 1990-. B.S., The Pennsylvania State University, 1979; M.Ed., 1995.*

Administrative Affairs

Robert E. Hamilton, *Vice President for Administration.*

Harold G. Schwalm, 1994-; *Director of Maintenance, 1994-.*

Robert E. Harnish, 1967-; *Manager of the College Store, 1967-. B.A., Randolph Macon College, 1966.*

Margaret A. Lahr, 1988-; *Director of Housekeeping, 1988-.*

George F. Lovell Jr., 1988-; *Superintendent of Buildings and Grounds, 1988-*.

Gary V. Nolan, 1996-; *Assistant Manager of the College Store, 1996-. B.A., Lebanon Valley College, 1992; M.S., Virginia Polytechnic Institute and State University, 1994.*

Louis A. Sorrentino, 1971-; *Director of Athletics, 1981-. B.A., Lebanon Valley, 1954; M.S., Bucknell University, 1961.*

Kathleen Tierney, 1983-; *Associate Director of Athletics, Coordinator of Summer Sports Camps, 1988-. B.S., State University of New York at Brockport, 1979.*

Kevin R. Yeiser, 1982-; *Director of Grounds, 1982-.*

Allen R. Yingst, 1989-; *Director of Security and Safety, 1990-.*

Athletics

Michael J. Cerasuolo, 1996-; *Assistant Football Coach, 1996-. B.S., Springfield College, 1993; M.S., Ithaca College, 1994.*

John Gergle, 1994-; *Baseball Coach, 1994-.*

Peg A. Kauffman, 1993-; *Women's Basketball Coach, 1993-. B.A., Millersville University, 1987; M.Ed, 1991.*

Lawrence M. Larthey, 1988-; *Wrestling Coach, 1988-. B.S., Lebanon Valley College, 1972.*

Allan G. MacCormack, 1997-; *Ice Hockey Coach, 1997-. B.S., St. Lawrence University, 1974; M.S., Ithaca College, 1975.*

Brad F. McAlester, 1994-; *Men's Basketball Coach, 1994-. B.A., Southampton College of Long Island University, 1975.*

David A. Murray, 1996-; *Head Football Coach, 1996-. B.S., Springfield College, 1981; M.S., Ithaca College, 1984; Certification of Advanced Study, State University College at Cortland, 1997.*

Cliff Myers, 1994-; *Head Tennis Coach, 1994-.*

Wayne Perry, 1987-; *Women's Volleyball Coach, 1988-. B.S., Lebanon Valley College, 1978.*

Mark Pulisic, 1992-; *Head Soccer Coach, 1993-.*

O. Kent Reed, 1971-; *Men's Track and Field Coach, Men's and Women's Cross-Country Coach, 1971-. B.S., Otterbein College, 1956; M.A., Eastern Kentucky University, 1970.*

Matthew J. Shell, 1997-; Assistant Football Coach, 1997-; B.S., Cortland College, 1992; M.S., State University of New York at Albany, 1995.

Robert Simmons, 1996-; Assistant Basketball Coach, 1996-; B.A., Wilkes University, 1996.

Louis A. Sorrentino, Director of Athletics, 1971-; Golf Coach, 1989-.

James E. Stark, 1986-; Athletic Trainer, 1986-. B.S., Lock Haven University, 1983; M.Ed., Shippensburg University, 1986.

Kathleen M. Tierney, 1983-; Associate Director of Athletics, Coordinator of Summer Sports Camps, 1988-; Field Hockey Coach, 1983-.

FACULTY

Active

Howard L. Applegate, 1983-; Professor of History and American Studies. Chairperson of the Department of History and American Studies. B.A., Drew University, 1957; M.A., Syracuse University, 1960; Ph.D., 1966. (On leave, Fall 1997)

Sharon O. Arnold, 1986-; Associate Professor of Sociology. B.A., University of Akron, 1964; M.A., 1967; M.S.W., Temple University, 1994.

Susan L. Atkinson, 1987-; Associate Professor of Education. B.S., Shippensburg University, 1972; M.Ed., (Elementary Education) 1973; M.Ed., (Special Education), 1979; D.Ed., Temple University, 1987.

Eric Bain-Selbo, 1997-; Assistant Professor of Religion and Philosophy. B.A., University of Tennessee, 1987; M.A., Miami University, 1988; Ph.D., University of Chicago, 1997.

Philip A. Billings, 1970-; Professor of English. B.A., Heidelberg College, 1965; M.A., Michigan State University, 1967; Ph.D., 1974.

Marie G. Bongiovanni, 1990-; Associate Professor of English. B.A., Temple University, 1977; M.B.A., Drexel University, 1982; M.L.A., University of Pennsylvania, 1996.

Donald C. Boone, 1988-; Associate Professor of Hotel Management. B.A., Michigan State University, 1964; M.B.A., 1966.

Leslie E. Bowen, 1993-; Lecturer in Art. B.S.A., Moore College of Art, 1972; M.F.A., Pennsylvania Academy of Fine Art, 1993.

J. Patrick Brewer, 1997-; Assistant Professor of Mathematical Sciences. B.S., Northern Arizona University, 1991; M.S., University of Oregon, 1993; Ph.D., 1997.

James H. Broussard, 1983-; Professor of History. A.B., Harvard University, 1963; M.A., Duke University, 1965; Ph.D., 1968.

D. Eugene Brown, 1983-; Professor of Political Science. B.S., Western Illinois University, 1969; M.A., State University of New York at Binghamton, 1973; Ph.D., 1982.

Donald E. Byrne Jr., 1971-; Professor of Religion and History. Director of the American Studies Program. B.A., St. Paul Seminary, 1963; M.A., Marquette University, 1966; Ph.D., Duke University, 1972.

Sharon F. Clark, 1986-; Professor of Business Administration. B.A., University of Richmond, 1969; J.D., 1971.

Richard D. Cornelius, 1985-; Professor of Chemistry. Chairperson of the Department of Chemistry. B.A., Carleton College, 1969; Ph.D., University of Iowa, 1974.

Salvatore S. Cullari, 1986-; Professor of Psychology. Chairperson of the Department of Psychology. B.A., Kean College, 1974; M.A., Western Michigan University, 1976; Ph.D., 1981.

Donald B. Dahlberg, 1980-; Professor of Chemistry. B.S., University of Washington, 1967; M.S., Cornell University, 1969; Ph.D., 1971. (On leave, 1997-98)

Michael A. Day, 1987-; Professor of Physics. Chairperson of the Department of Physics. B.S., University of Idaho, 1969; M.A., 1975, Ph.D., 1977, University of Nebraska (Philosophy). M.S., 1978, Ph.D., 1983, University of Nebraska (Physics).

Johannes M. Dietrich, 1995-; Assistant Professor of Music. B.M., Montana State University, 1990; M.M., University of Cincinnati College-Conservatory of Music, 1992; D.M.A., 1996.

Deanna L. Dodson, 1994-; Assistant Professor of Psychology. B.S., Tennessee Technological University, 1985; M.S., Memphis State University, 1988; Ph.D., 1992.

Jenny E. Dorrington, 1997-; Assistant Professor of Mathematical Sciences. B.A., Bryn Mawr, 1986; M.A., Northwestern University, 1990; Ph.D., 1994.

Phylis C. Dryden, 1987-; Associate Professor of English. B.A., Atlantic Union College, 1976; M.A., State University of New York at Albany, 1985; D.A., 1988.

Scott H. Eggert, 1983-; Professor of Music. B.F.A., University of Wisconsin (Milwaukee), 1971; M.A., University of Chicago, 1974; D.M.A., University of Kansas, 1982.

Dale J. Erskine, 1983-; Professor of Biology. Director of the Youth Scholars Institute. B.A., University of Maine at Portland, 1974; M.A., State University of New York at Buffalo, 1976; Ph.D., University of Oklahoma, 1981.

Patricia Fay, 1996-; Assistant Professor of Art. Chairperson of the Department of Art. B.A., The College of William and Mary, 1980; M.F.A., University of Massachusetts, 1987.

Michael D. Fry, 1983-; Professor of Mathematical Sciences. B.A., Immaculate Heart College, 1975; Ph.D., University of Illinois, 1980.

Marianne Goodfellow, 1990-; Lecturer in Sociology. B.A., State University of New York at Plattsburgh, 1979; M.A., The Pennsylvania State University, 1982; Ph.D., 1995.

Michael A. Grella, 1980-; Professor of Education. Chairperson of the Department of Education. B.A., St. Mary's Seminary and University, 1958; M.A., West Virginia University, 1970; Ed.D., 1974.

Gary Grieve-Carlson, 1990-; Professor of English. Chairperson of the Department of English. B.A., Bates College, 1977; M.A., State University of New York at Binghamton, 1980; Ph.D., Boston University, 1988. (On leave, Spring 1997)

Carolyn R. Hanes, 1977-; Professor of Sociology. Chairperson of the Department of Sociology and Social Work. B.A., Central Michigan University, 1969; M.A., University of New Hampshire, 1973; Ph.D., 1976.

Stacy A. Hazen, 1996-; Assistant Professor of Biology. B.S., Westminster College, 1991; Ph.D., The Pennsylvania State University, 1996.

Bryan V. Hearsey, 1971-; Professor of Mathematical Sciences. Chairperson of the Department of Mathematical Sciences. B.A., Western Washington State College, 1964; M.A., Washington State University, 1966; Ph.D., 1968.

Robert H. Hearson, 1986-; Associate Professor of Music. B. Music, University of Iowa, 1964; M.A., 1965; Ed.D., University of Illinois, 1983.

John H. Heffner, 1972-; Professor of Philosophy. Chairperson of the Department of Religion and Philosophy. B.S., Lebanon Valley College, 1968; B.A., 1987; A.M., Boston University, 1971; Ph.D., 1976.

Paul A. Heise, 1991-; Associate Professor of Economics. B.S.F.S., Georgetown University, 1958; M.A., 1963; M.P.A., Harvard University, 1972; Ph.D., New School for Social Research, 1991.

Jeanne C. Hey, 1989-; Associate Professor of Economics. Chairperson of the Department of Political Science and Economics. B.A., Bucknell University, 1954; M.B.A., Lehigh University, 1982; Ph.D., 1990.

Barry R. Hill, 1993-; Assistant Professor of Music. Director of the Music Recording Technology Program. B.S., Music with Recording Arts, University of North Carolina at Asheville, 1989; M.M., New York University, 1996.

J. Noel Hubler, 1995-; Assistant Professor of Religion and Philosophy. B.A., University of Pennsylvania, 1981; Ph.D., 1995.

Barry L. Hurst, 1982-; Associate Professor of Physics. B.S., Juniata College, 1972; Ph.D., University of Delaware, 1982.

Diane M. Iglesias, 1976-; Professor of Spanish. Chairperson of the Department of Foreign Languages. B.A., Queens College, 1971; M.A., 1974; Ph.D., City University of New York, 1979.

Cordelia W. Jennings, 1997-; Lecturer in Accounting. B.A., Washington College, 1976; M.B.A., Rutgers University, 1979.

Richard A. Joyce, 1966-; Associate Professor of History. A.B., Yale University, 1952; M.A., San Francisco State College, 1963.

John P. Kearney, 1971-; Professor of English. B.A., St. Benedict's College, 1962; M.A., University of Michigan, 1963; Ph.D., University of Wisconsin, 1968.

Donald E. Kline, 1997-; Assistant Professor of Education. B.S., Lebanon Valley College, 1966; M.Ed., Millersville University, 1975; M.S.Ed., Shippensburg University, 1977; Ed.D., Lehigh University, 1990.

Kerrie D. Laguna, 1997-; Assistant Professor of Psychology. B.S., The Pennsylvania State University, 1990; B.Ed., 1991; M.A., University of Nebraska, 1996; Ph.D., 1997.

Mary L. Lemons, 1996-; Assistant Professor of Music. B.S., University of Illinois at Urbana-Champaign; M.S., 1990; Ed.D., 1996.

Robert W. Leonard, 1988-; Associate Professor of Business Administration. Chairperson of the Department of Business Administration. B.A., Ohio University, 1977; M.A., St. Francis School of Industrial Relations, 1978; M.B.A., Ohio State University, 1986.

Louis Manza, 1995-; Assistant Professor of Psychology. B.A., State University of New York at Binghamton, 1988; M.A., Brooklyn College, 1991; M.Phil., City University of New York, 1991; Ph.D., 1992.

Leon E. Markowicz, 1971-; Professor of Business Administration. A.B., Duquesne University, 1964; M.A., University of Pennsylvania, 1968; Ph.D., 1972.

Silva-Martin-Hernández, 1997-; Assistant Professor of Spanish. *Licenciatura, Universidad de Deusto-Bilbao, 1993; Diplomatura, 1994; Ph.D., The Pennsylvania State University, 1997.*

G. Daniel Massad, 1985-; Artist-in-Residence. *B.A., Princeton University, 1969; M.A., University of Chicago, 1977; M.F.A., University of Kansas, 1982.*

Mark L. Mecham, 1990-; Professor of Music. *Chairperson of the Department of Music. B.M., University of Utah, 1976; M.M., 1978; D.M.A., University of Illinois at Urbana-Champaign, 1985.*

Owen A. Moe Jr., 1973-; Professor of Chemistry. *B.A., St. Olaf's College, 1966; Ph.D., Purdue University, 1971.*

Shelly Moorman-Stahlman, 1997-; Assistant Professor of Music. *B.Mus., University of Missouri-Kansas City, 1985; M.M., 1986; D.M.A., University of Iowa, 1990.*

Philip G. Morgan, 1969-; Associate Professor of Music. *B.M.E., Pittsburg State University (Kansas), 1962; M.S., 1965.*

John D. Norton, 1971-; Professor of Political Science. *B.A., University of Illinois, 1965; M.A., Florida State University, 1967; Ph.D., American University, 1973.*

Philip J. Oles, 1997-; Assistant Professor of Chemistry. *B.A., University of Connecticut, 1968; Ph.D., University of Massachusetts, 1974.*

Mary K. Pettice, 1994-; Assistant Professor of English. *B.A., Illinois Wesleyan University, 1982; M.S., University of Illinois, 1983; M.A. 1986; Ph.D., University of Houston, 1994.*

Sidney Pollack, 1976-; Professor of Biology. *B.A., New York University, 1963; Ph.D., University of Pennsylvania, 1970.*

Kevin B. Pry, 1991-; Lecturer in English. *B.A., Lebanon Valley College, 1976; M.A., The Pennsylvania State University, 1980; Ph.D., 1984.*

Barney T. Raffield III, 1990-; Professor of Business Administration. *B.B.A., Southern Methodist University, 1968; M.B.A., 1971; Ph.D., Union Graduate School, 1982. (On leave, Spring 1998)*

Sharon Hall Raffield, 1990-; Associate Professor of Sociology. *A.B., Wheaton College, 1963; M.S.W., Washington University, 1967. (On leave, Spring 1998)*

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Mark A. Townsend, 1983-; Professor of Mathematical Sciences. B.S., Bethany Nazarene College, 1965; M.A., Oklahoma University, 1969; Ed.D., Oklahoma State University, 1983.

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Madelyn J. Albrecht, 1973-1990; Associate Professor Emerita of Education. B.A., Northern Baptist College, 1952; M.A., Michigan State University, 1958; Ph.D., 1972.

Richard C. Bell, 1966-1987; Associate Professor Emeritus of Chemistry. B.S., Lebanon Valley College, 1941; M.Ed., Temple University, 1955.

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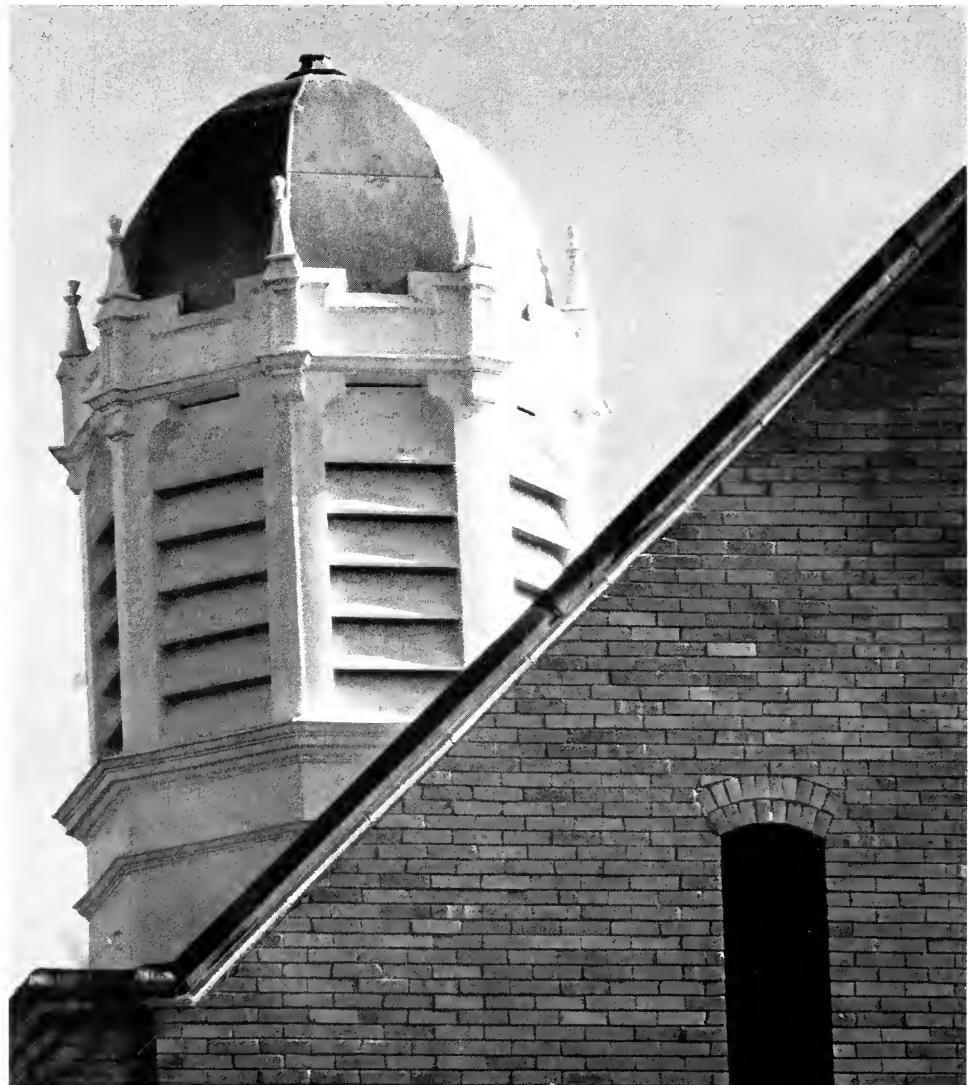
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Jersey Shore Medical Center: Medical Director, Martin Krummerman, M.D.; Program Director, Perla Simmons, M.P.A., M.T.(ASCP),S.H.

Lancaster General Hospital: Medical Director, James T. Eastman, M.D.; Program Director, Nadine Gladfelter, M.S., M.T.(ASCP)

Polyclinic Hospital of Harrisburg: Director, Frank R. Rudy, M.D.; Program Director, Marcy Anderson, M.S., M.T.(ASCP)



Lebanon Valley College has educated students since 1866.

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THE THOMAS RHYS VICKROY DISTINGUISHED TEACHING AWARDS

The Vickroy Award recipient, who must be a full-time member of the college faculty, is selected by the president of the college after appropriate consultation with alumni, students, faculty and staff. The Vickroy Award replaces the Lindback Award which was presented through the 1993 academic year.

Previous Awardees

1985	Leon E. Markowicz, Ph.D., Professor of English
1986	Carolyn R. Hanes, Ph.D., Professor of Sociology and Social Work and Leadership Studies
1987	Donald E. Byrne, Jr., Ph.D., Professor of Religion
1987	Mark A. Townsend, Ed.D., Assistant Professor of Mathematical Sciences
1988	William H. Fairlamb, Mus.B., Professor of Music
1989	Paul L. Wolf, Ph.D., Professor of Biology
1990	Owen A. Moe Jr., Ph.D., Professor of Chemistry
1991	Scott H. Eggert, D.M.A., Associate Professor of Music
1992	Gary Grieve-Carlson, Ph.D., Assistant Professor of English
1993	Diane M. Iglesias, Ph.D., Professor of Spanish
1994	Sidney Pollack, Ph.D., Professor of Biology and Barbara S. Wirth, M.B.A., Assistant Professor of Accounting
1995	David I. Lasky, Ph.D., Professor of Psychology
1996	James W. Scott, Ph.D., Professor of German
1997	Howard L. Applegate, Ph.D., Professor of History and American Studies

THE NEVELYN J. KNISLEY AWARD FOR INSPIRATIONAL TEACHING

In 1988, Lebanon Valley College created an award for part-time and adjunct members of the college faculty similar to the philosophy of the Vickroy Award. The first awardee was Nevelyn J. Knisley. After the presentation of the first award, the president of the college named this series of awards for Mrs. Knisley in recognition for her twenty-four years of inspired teaching in music.

Previous Awardees

1988	Nevelyn J. Knisley, M.F.A., Adjunct Associate Professor of Music
1989	Carolyn B. Scott, B.A., Adjunct Instructor in French
1990	Michael J. Asken, Ph.D., Adjunct Associate Professor of Psychology
1991	Joanne Cole Rosen, B.A., Adjunct Assistant Professor of Chemistry
1992	Kevin B. Pry, Ph.D., Adjunct Assistant Professor of English
1993	Thomas M. Strohman, B.S., Adjunct Instructor in Music
1994	Timothy M. Dewald, M.Div., Adjunct Instructor in Mathematical Sciences
1995	Léonie Lang-Hambourg, M.A., Adjunct Assistant Professor of German
1996	Cynthia R. Johnston, B.S., Adjunct Instructor in Chemistry
1997	Richard J. Tushup, Ph.D., Adjunct Assistant Professor of Psychology

ACCREDITATION

Lebanon Valley College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools.

Lebanon Valley College is also accredited by the Pennsylvania Department of Education, the National Association of Schools of Music and the American Chemical Society.

Lebanon Valley College is on the approved list of the Regents of the State University of New York and of the American Association of University Women.

Lebanon Valley College is a member of the following: American Association of Colleges; National Association of Independent Colleges and Universities; Pennsylvania Foundation for Independent Colleges; College Entrance Examination Board; College Scholarship Service; Council of Independent Colleges; National Collegiate Athletic Association; Middle Atlantic States Collegiate Athletic Conference; Penn-Mar Athletic Conference; Central Pennsylvania Field Hockey Association; Eastern College Athletic Conference.

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Lebanon Valley College does not discriminate on the basis of race, color, national and ethnic origin, sex, age, religion, sexual preference, or handicap.

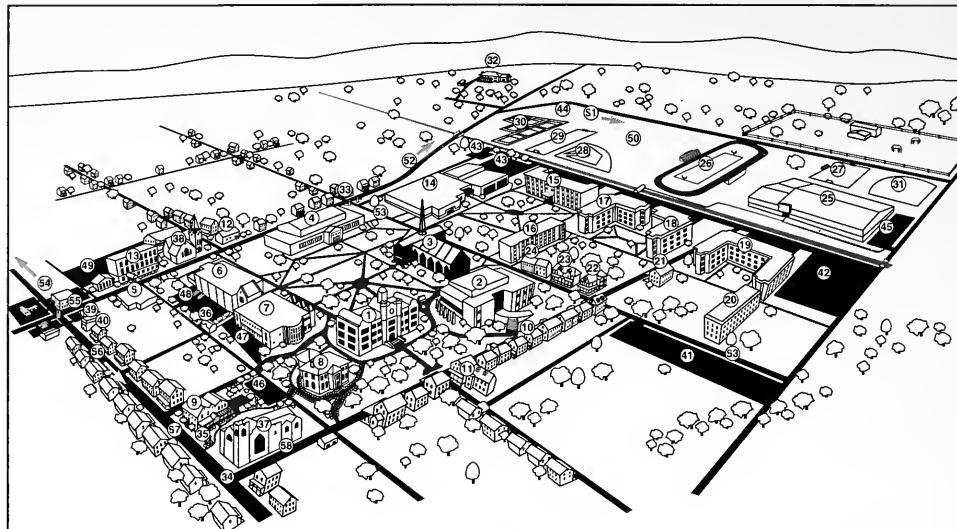
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Detailed information on student retention and graduation rates is available in the Office of the Registrar.

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* All information is correct as of August 1, 1997.

CAMPUS MAP



ACADEMIC & ADMINISTRATIVE QUADRANGLE

1. Humanities Center and Administrative Offices: Academic Departments: English Department, Foreign Languages Department, History & American Studies Department, Political Science & Economics Department, Religion & Philosophy Department, Sociology & Social Work Department. Administrative Offices: Business Office, Vice President & Controller, Continuing Education, Copy Center, Mail Room, MBA Office, Media Services, President, Registrar, Secretary of the College, Security & Safety, Telephone Services, Senior Vice President & Dean of the Faculty, Vice President for Administration.
2. Blair Music Center: Music Department, Education Department, Lutz Recital Hall, Music Recording Technology Studios
3. Miller Chapel: Chaplains' Office, Chapel, Classrooms
4. Lynch Memorial Hall: Intercollegiate Athletics, Emmett C. Roop Management Department Wing, William H. Lodge Mathematical Sciences Center, Computer Services Department, Lynch Gym
5. Maintenance Shops
6. Garber Sciences Center: Biology Department, Chemistry Department, Physics Department, Psychology Department
7. Vernon and Doris Bishop Library
8. Carnegie Building: Admission and Financial Aid
9. Laughlin Hall Advancement Offices: Alumni Programs, Annual Giving, College Relations, Development, Planned Giving
10. Wagner House: Student Services Offices
11. Friendship House: Residence Hall
12. Fencil Building: Art Department
13. Derickson Hall A and B: Student Apartments

RESIDENTIAL QUADRANGLE

14. Allan W. Mund College Center: Conference Services, Dining Halls, Leedy Theater, Student Activities Offices, Career Planning & Placement, College Store, WLVC
15. Mary Capp Green Residence Hall
16. Vickroy Residence Hall
17. Keister Residence Hall
18. Hammond Residence Hall
19. Funkhouser Residence Hall

20. Silver Residence Hall
21. North College Residence Hall
22. Shroyer Health Center
23. Sheridan Avenue Residence Hall
24. Centre Residence Hall

ARNOLD SPORTS & RECREATION COMPLEX

25. Edward H. Arnold Sports Center: Indoor Track, Pool, Recreational Facilities, Physical Education
26. Henry & Gladys Arnold Field
27. Soccer Field
28. Baseball Field
29. Hockey Field
30. Tennis Courts
31. Softball Field

OTHER FACILITIES

32. Kreiderheim: Guest and Conference Facility
33. Benjamin Cantor Entrance
34. South Campus Entrance
35. Bollinger Plaza
36. Heating Plant
37. Annville United Methodist Church
38. The Suzanne H. Arnold Gallery: Suzanne H. Arnold Art Gallery, Zimmerman Recital Hall
39. Maintenance Offices
40. Frank Aftosmes House: Middle Atlantic Conference
50. Henry and Gladys Arnold Field

PARKING LOTS (41 - 49) • AREA STREETS

51. Heisey Road
52. To U.S. 22, I-81 and I-78
53. Sheridan Avenue
54. To Palmyra and Hershey
55. North White Oak Street/PA 934
56. To Lebanon and Reading
57. Main Street/U.S. 422
58. College Avenue

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PHONE NUMBERS

*College Offices**

Academic Offices	6208
Academic Support	6988
Admissions	6181
Business Office	6300
Career Planning & Placement	6235
College Center	6161
College Store	6313
Computer Lab (general)	6067
Computer Science Lab	6067
Continuing Education	6213
Dean of Student Services	6233
Financial Aid	6181
Registrar	6215
Safety and Security	6111
Vice president/dean of faculty	6208

*Academic Offices**

American Studies	6356
Art	6015
Biology	6175
Business Administration	6101
Chemistry	6140
Economics	6330
Education	6305
English	6240
Foreign Language	6250
History	6355
Mathematical Sciences	6080
Music	6275
Philosophy	6130
Physical Education	6364
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* Area code 717, prefix 867.

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1997 – 1998 ACADEMIC CALENDAR

FIRST SEMESTER

August	23	Sat.	9 a.m.	Residence halls open for new students
	23	Sat.	10 a.m.	First Year Experience
	23	Sat.	2 p.m.	Opening Convocation
	24	Sun.	Noon	Residence halls open for students
	25	Mon.	1-4 p.m.	Add/Drop day
	25	Mon.	6:30 p.m.	Evening classes begin
	26	Tue.	8 a.m.	Day classes begin
September	26-28			Family Weekend
October	8	Wed.	Noon	Mid-term grades due
	10	Fri.	5 p.m.	Fall break begins
	14	Tues.	6:30 p.m.	Classes resume
	17	Fri.	5 p.m.	Incomplete grades due
	17-19			Homecoming Weekend
	31	Fri.	5 p.m.	Last day to change registration or withdraw from a course
November	26	Wed.	3 p.m.	Thanksgiving vacation begins
December	1	Mon.	8 a.m.	Classes resume
	5	Fri.	5 p.m.	Last day for first-semester freshmen to withdraw from a course
	5	Fri.	5 p.m.	Day classes end
	6	Sat.		Reading Day for full-time students
	7	Sun.		Reading Day
	8-13	Mon.-Sat.		Final examinations
	13	Sat.	5 p.m.	Semester ends
	19	Fri.	Noon	Final grades due

SECOND SEMESTER

January	11	Sun.	Noon	Residence halls open for students
	12	Mon.	9-11 a.m.	Add/Drop Day
	12	Mon.	1 p.m.	Classes begin (labs only)
	12	Mon.	6:30 p.m.	Evening classes begin
	24	Tues.	11 a.m.	Founders Day
	25	Wed.	Noon	Mid-term grades due
	27	Fri.	5 p.m.	Spring vacation begins
February	6	Fri.	5 p.m.	Incomplete grades due
	9	Mon.	8 a.m.	Classes resume
	20	Fri.	5 p.m.	Last day to change registration or withdraw from a course
April	9	Thurs.	9:30 p.m.	Easter vacation begins
		<i>(Friday day classes to be held on Thursday)</i>		
	13	Mon.	6:30 p.m.	Classes resume
	29	Wed.	5 p.m.	Last day for first-semester freshmen to withdraw from a course
	29	Wed.	9:30 p.m.	Classes end
	30	Thurs.		Reading Day
May	1-7	Fri.-Thurs.		Final examinations
	3	Sun.		Reading Day
	7	Thurs.	9:30 p.m.	Semester ends
	8	Fri.	Noon	Senior grades due
	9	Sat.	9 a.m.	Baccalaureate Service
	9	Sat.	11 a.m.	129th Commencement
	15	Fri.	Noon	All final grades due

Lebanon Valley College
Annville, PA 17003-0501
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